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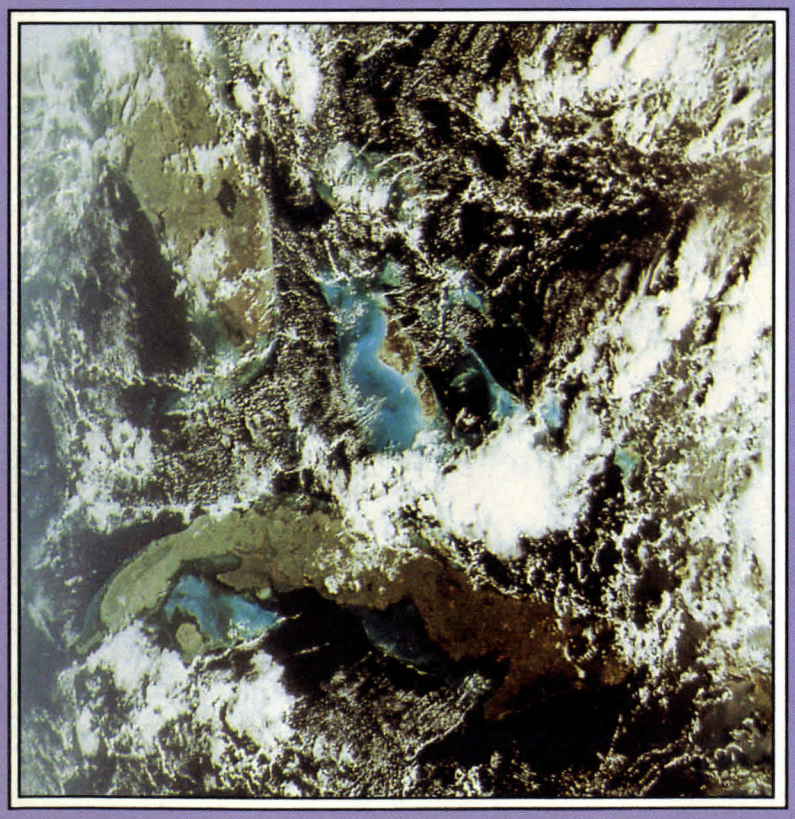

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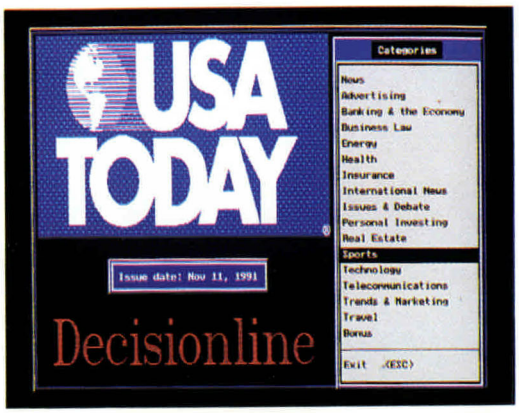

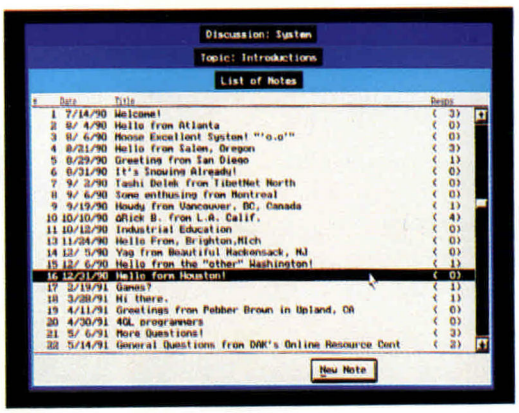

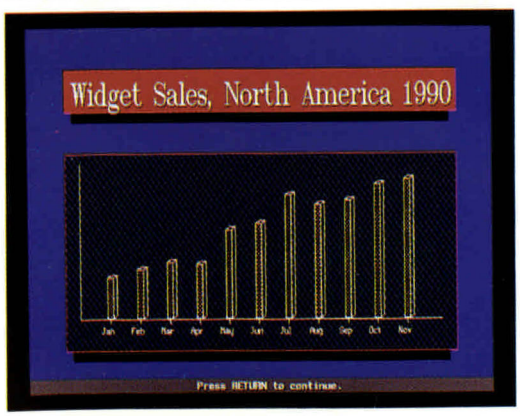

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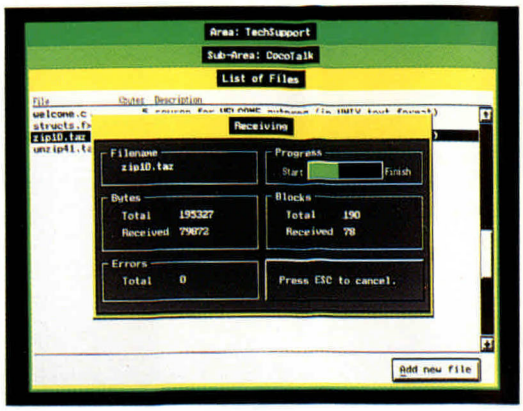

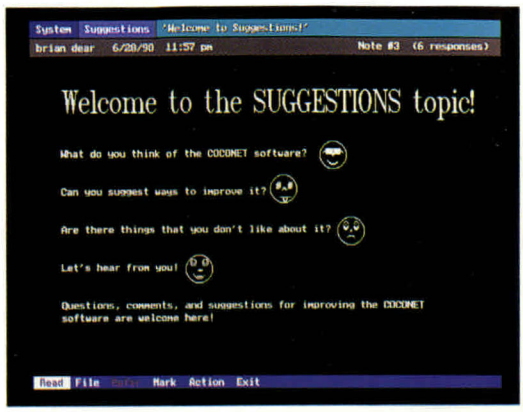

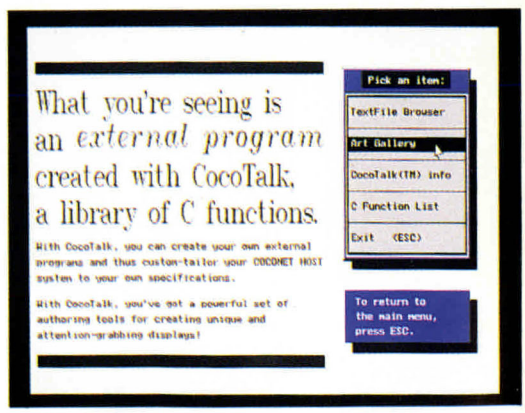

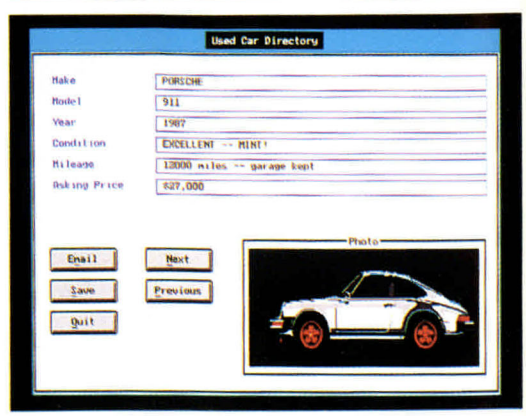

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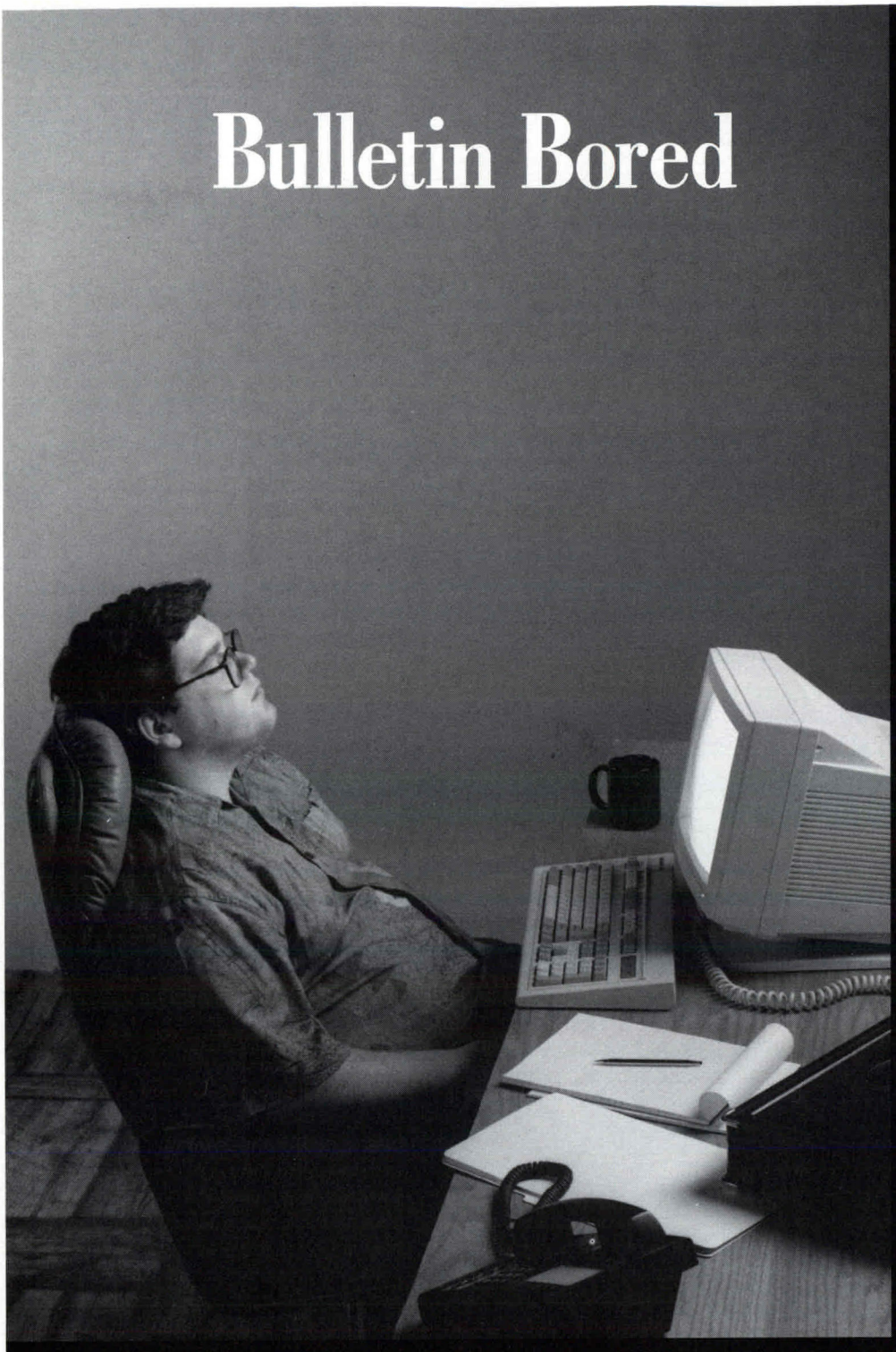

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<u>COVER PHOTO</u> - High resolution image from Chinese Feng Yn 1-2 weather satellite at 832 km altitude. View is of Cuba, Florida, and the Atlantic at 1 km per pixel. Available for download from DRIG DATALINK BBS

EDITOR'S NOTES

US WEST JOINS ATTACK ON BULLETIN BOARDS

Boardwatch has covered for several years the tentative and sly attempts by local telephone companies to wipe out the hobby bulletin board. They don't understand them, but they're vaguely aware that BBSs are not "normal" and more recently they've come to view them erroneously as competition for their own vague and ill-formed plans for information services. This derives from a propensity for telephone companies to want money based on what they think you are using their service for, rather than basing prices on what they are delivering. They've never really understood what BBSs were using the network for, but they were uneasy that they weren't getting the last available twelve cents extant in the world. Somewhere, somehow, they were getting RIPPED OFF by those cunning PC guys and there had to be a buck in there somewhere.

As an example of this line of thinking, US West is introducing ISDN service in Omaha this July under the name PC Phone. Two things about the introduction jump out immediately. One is that while final pricing has not been set yet, project manager Len Burres notes that it will be at something slightly under the price of their Olympia Washington test pricing of $97. As this is over three times higher than normal business service, we count this as just raving piracy and a crime against our economy. But more intriguing is that they are intentionally CRIPPLING ISDN so it WON'T handle data and offering it as the "voice package" and then charging a HIGHER rate for data use where they remove the block. ISDN is BY DEFINITION digital! Basically, they want to charge based on how you use the service, and directly the reverse of their effort and expense to provide it. How did we get to this egregious greed in a regulated monopoly utility? Is every PUC official in the country completely unconscious?

The posture of telephone companies relative to bulletin boards varies widely between Regional Bell Operating Companies (RBOC). Southwestern Bell has the worst record, essentially taking a posture of trying to wipe BBS off the face of the earth, but only while nobody's looking. Ameritech, at the other extreme, has a pretty good grip on the real economics behind the relationship between bulletin boards and telephone companies. Last June, they inserted a note in some 11 million telephone bills offering a free information package on online services. One of the sheets in this package listed bulletin boards operating in the Ameritech area of coverage and an explanation of how to call them.

Why such disparity? What does Ameritech know that SWBT doesn't? Part of it can be ascribed to their relative positions vis a vis information gateway services. Southwestern Bell was among the first of the RBOC to put up a gateway service and their SOURCELINE in Houston was certainly one of the most ambitious. It was also one of the most spectacular failures and there are nearly 300 information providers in Houston who wish today they had never seen a telephone. After luring them into investing megabucks in the "opportunity of the century," SWB left them swinging in the Texas wind in true phone boiler room style.

Ameritech looked very carefully at gateways and said, without equivocation, "No way - at least not now." Basically, they couldn't see any way the telephone company could add value to the situation enough to warrant a fee that would be attractive to them. Likewise, PacBell backed off gateways for the same reason.

These companies might just have had better analysts. There is a little secret regarding BBSs that some telephone companies know and others don't. One of the areas local telephone companies have looked to for growth in the past few years is second line installations. Some have gone so far as to launch significant television ad campaigns centered around the need for teen lines and a few have offered free installation during particular months.

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BBS users go through a cycle of initiation that runs from the "What's a BBS" phase through fanaticism and some eventually wind up running BBS of their own. But somewhere in the cycle, the spouse or spousette, as the case may be, throws a fit because they're waiting for a call from someone and the line is tied up with a download. Or worse, they pick up an extension phone to make a call and your 600 KB GIF of Yellowstone National Park that you were downloading at 300 baud dribbles out onto the floor. Inevitably, the $15 per month for a second line starts to look cheap.

We recently surveyed some BBS callers and found that nearly a third (**31%**) had installed a second telephone line specifically to use their modem. We estimate about **10.5 million** BBS callers and Dataquest, an industry research firm, puts the number at **9.6 million**. If you split the difference at 10 million, this represents over **3 million** second line installations in the United States - out of a total line count of some 120 million. At an average **$15** per month residential line charge, a conservative estimate of income to RBOC that they just wouldn't have ever had were it not for BBS operation runs around **$540 million** per year.

In a **$60 billion** market for local telephone service, this may not sound like most of it. But compared with the total figure of all the money made by all the RBOC in gateway/information services since the dawn of time (something dramatically less than zero dollars) it is immense. And for RBOC like Ameritech, with significant "zoned" local calling that is really measured like long distance, the second line charge is the very pointy tip of an immense iceberg.

In any event, up to this point US West has been quiet on BBS issues. They have experimented with a gateway service in Omaha with inconclusive, but certainly not overly encouraging results. And we would like to think they were content with the status quo. Basically, if you run a BBS for profit, you're supposed to pay commercial telephone rates. If you run one as a hobby from your house, you pay residential rates.

The problem came with the case of Tony Wagner of Portland Oregon. US West wanted to charge Tony business rates for his BBS, operated from a residence. Tony didn't want to pay them. So he went out to enlist the enraged mass of BBS operators around the country to his cause. In fact he called every computer or communications related publication in the country - at least twice. We're pretty confident of that because most of them called us to find out what was really going on. He plastered messages across FidoNet, the Internet, and every other network he could access.

The problem is that like many things, this case is not completely clean cut. Wagner is not a hobby BBS operator being ganged up on by the telephone company - at least not exactly. He rents a room in the house of a couple in Portland. The couple run a multi-line BBS from the house that is without a doubt a commercial enterprise and they pay business rates for their lines. Wagner also runs three lines on a Wildcat! system titled **First Choice Communications** at **(503)297-0278**, **(503)297-0279**, and **(503)297-0343**. The last line is "restricted" although Wagner asserts he receives no money at all from the BBS system. It may or may not in fact be used for profit, but he runs an echomail hub for FidoNet Region 17, and if he's not receiving money for the operation of the BBS and the telephone line, there are a bunch of FidoNet system operators up there who are looking for him. They all contribute funds to a pool to defray echomail costs.

In any event, US West sees a residence with nearly a dozen telephone lines to it, (several voice, at least one TDD line) and some of them are on a subscription BBS service, and Wagner wants some others classed as residential.

Wagner filed a complaint with the Oregon PUC and a docket was opened as **#UC-205**.

Here the story takes a turn. In January US West filed a brief with the Oregon PUC. But instead of dealing with Wagner on the merits of the case, they used the opportunity to present a wide ranging document asking that all BBS on the planet be considered business installations and that US West be allowed to charge all bulletin boards business rates

Jack Rickard - Editor Rotundus

under existing tariffs. Most of the justification revolved around the fact that BBS were using the network beyond what US West expected as "normal" usage - a few calls to relatives the way they portrayed it in the document. Since almost all traffic to BBSs are incoming calls, we could as easily make the case that they aren't "using" it at all, their callers are.

US West goes on to make a totally specious case based on loading of their capital equipment. In truth, BBS activity places NO extra load on switching equipment. All switch loading calculations are based on peak usage, and virtually ALL BBS usage occurs during non-peak hours.

But that aside, essentially, US West is using the worst possible case of Tony Wagner as representative of the BBS community in Oregon and taking this opportunity to get the law read the way they want it in the process. If the PUC sides with US West, this poses a REAL danger to the many truly hobby BBS systems in the state, many of whom really wouldn't be able to operate if forced to pay business rates.

Apparently the telephone companies are beginning to share information as well. According to Scott Lent of the Greater Kansas City Sysops Association, William Bailey, District Manager of Rate Administration admitted conferring

with US West in Oregon about tariff wording issues in the Kansas City area. Southwestern Bell and the GKCSA have actually been approaching some rational agreement on BBSs and tariffs in recent weeks - though negotiations are hardly completed at this point.

The Oregon PUC should return some ruling in March. It is unfortunate that an individual can deviously enlist the assistance of well-meaning BBS operators in their cause under dubious pretenses. But whatever the nature of the specific facts involving First Choice Communications, we don't view them as representative, and certainly not typical, of most of the hobby BBS operating in Oregon.

And the wider question remains. If ALL the BBS in the country did pay business rates for their telephone lines, it is approximately NO money to the telephone industry in ANY measurable way (40,000 X additional $25 monthly = $0.00 in RBOC terms). And if they are successful in eliminating them from the landscape, they will notice a VERY measurable drop in their own revenues from second line installations from callers. All that leaves is an anti-competitive stance regarding their own information services versus hobby bulletin board systems. If that is really the case, (and I still can't believe they REALLY view the world that way) we should demand Congress immediately shut down telcos as information service providers forever. Not so much to prevent the anti-competitive behavior, but just to place a quarantine on stupid and keep it from spreading by telephone.

If there ever will be a market in this country for **$35** per-hour yellow page services such as that introduced by NYNEX this month, BBS systems have nothing to do with it. It would be a shame to stomp out a successful bulletin board environment as a prerequisite to the inevitable failure of the telcos in information.

Rockwell has introduced a new modem chipset offering V.32bis 14,400 bps modulation WITH a 14,400 bps fax function. The good news is that Intel, Supra, Practical Peripherals, and soon a couple of dozen other modem manufacturers are introducing very attractively priced and very capable modems based on this chipset. The bad news is that it doesn't work. Actually it's not too bad. The PR for all these news models was cranked up before they actually found out that the chip set was broke so you'll see plenty of announcements of very enticing hardware. Further, it's so badly broken that there's about no chance of anything getting through or of them forgetting to fix it. It's a full blown emergency at this point. But in reality, for us it probably means all those modems you see advertised won't actually be shipping for another month or so. And THAT would be something REALLY different now wouldn't it?

I was again honored to be named to Microtimes Magazine's List of 100 Most Influential People in the Computer Industry. This seems like good work if you can get it. Our thanks to Microtimes.
Jack Rickard
Editor

LETTERS

Address correspondence to Letters to the Editor, Boardwatch Magazine, 7586 West Jewell Ave., Suite 200, Lakewood, CO 80232.

Dear Mr. Rickard

Thank you for reprinting the March 1990 Editorial; it said a great deal to me. A few years ago, I left the warm embrace of a large multi-national aircraft company to write my modest little shareware programs. Sometimes, when I'm heavily involved in marketing and paperwork, I forget why I turned my back on the mahogany-paneled corporate environment in favor of the pedestrian decor of my basement computer room. Your editorial brought it all back.

In particular, I liked this paragraph:

"In reality, their day jobs amount to nothing. You couldn't begin to tell what their role in life was from their job title - much less what it is they actually did for these corporations day by day.. The "nothing" [personal] projects were all fascinating."

I left the corporate world to make NEW things instead of installing and tweaking cantankerous mainframe software. That wasn't creation; it was regurgitation!

Now I work longer hours, for less pay. And I love it! Thank you for reminding me (and, no doubt, many others) just why entrepreneurship is so fulfilling.

Sincerely,

Timothy Campbell
Pinnacle Software

Timothy:

It can indeed be difficult, when up to the armpits in alligators, to remember that the original purpose was to drain the swamp. I too chafe a bit under the cloud of tax reports, accounting, and other paper clip detritus inevitable in running a business - no matter how small.

But as you point out, the rewards are there if we take a moment once in awhile to smell the coffee. The numbers of talented individuals leaving the corporate world for more work, less benefits and pay, and more satisfaction in their own small ventures indicates to me the corporate model is failing. I would sooner sell pencils in the mall than return to that world. Maybe high-tech pencils with ads appearing on them transmitted from a central service. Mood pencils that change color based on your emotional state. Perhaps a selection of pencils of Brazilian Rosewood, or Carpathian Elm with gold appointments. But I would literally sell pencils before going back.

The problem is that large projects require people and resources to accomplish. While we can individually escape the castle, in the long run we must develop a new model by which large numbers of people can cooperate to apply available resources to big problems. If we can, and still retain the enthusiasm, committment, and joy of work among those numbers of people, we can build starships. If we can't, we will have an oversupply of "solutions" from the creative element of our cottage industry, and no means of implementation.

The picture I have right now involves cottages networked using this communications technology to form modular, flexible, de facto entities of fairly immense size. That would require some fairly dramatic changes in vision for most of the participants and further development of the technology - a zillion subcontractors all networked and reconfigurable in days or hours. The building industry, for example, has more or less successfully worked this way all along.

There are other experiments with employee-owned corporations, collegial campuses, small business incubators, etc. In any event, it won't be a General Motors and I'm relatively certain that today's corporations will fail before adapting. It will be companies such as yours in growing larger that will develop the model. So tell me, how do we build the starship?

Jack Rickard

Jack,

It was (as usual) a delight to read your most recent editorial (March 92). Your insights are nothing short of brilliant.

Most Americans don't realize how differently their neighbours to the north see the world. For example, I got into a lengthy discussion about privacy on NaNet. Someone came along saying something about 1st amendment rights as if they were universal to everyone in the world.

I don't wish to sound insulting but most Americans are very egocentric when it comes to their ideas of how the world works. Canadians are saturated with American media. We see "America this, America that..." day in and day out. Americans talk about things as if they're the only people on the planet experiencing any particular trend or problem.

It gets to the point where it's both laughable and sickening. I'm sure you're aware of all the 'Japan bashing' that has been going on. Every time I hear about it it makes we giggle with delight, not because I dislike Japan, but because the tables have turned. Let me explain.....

The U.S. has always been tinkering with the Canadian economy. They've been telling us that foreign ownership of our companies, factories and resources is good for Canada. Then when the Japanese come in and buy up a few large American firms the Americans don't like it. (Remember: foreign ownership is good for you Canada).

So remember, every time you use the A-word (America) there are thousands of people outside of the U.S. that either cringe or giggle.

Welcome to the global village, cyberspace.

James Macfarlane
Toronto Canada

James:

As a broad generalization, Americans ARE egocentric and often ignorant in their view of "how the world works" - certainly outside their own borders. Specifically with reference to the situation you cite, there is a long held American Tradition usually referred to as the "Whose Ox Got Gored?" concept. It has to do with the universal application of your own self interest to everything in sight, and a very handy set of flexibly applicable philosophical views in support of a quest for the last twelve cents in the world.

Understand too, that in America, and particularly in the two fields of government and journalism, there is a tremendous number of people who really don't have anything to say, but are under tremendous career pressure to say it, and to repeat it forcefully and with great devotion on a full-time basis. The result is mostly noise for the entertainment of those who spend too much time watching television and rates on the scale of value at approximately the level of soap operas and cartoons.

The practice of Japan bashing is pretty much limited to those herd animals that have a vague concept that something isn't going well, and it must be someone else's fault. Some of our industrial leaders have actively fomented the concept that it is somehow in the best interests of American consumers to purchase inferior quality goods at higher prices because the Japanese play dirty in the world of business competition. They further seek to mandate by law that American consumers WILL pay higher prices for inferior goods and that somehow that will be in their best interests as well. And the big stick is that the loss of jobs in this country is due not to the pathetic short-sightedness and lack of vision of these same leaders, but somehow also the fault of the Japanese who should be punished by the act of American consumers paying higher prices for inferior quality goods.

Most of this is pretty amusing, but I do confess some irritation at the underlying implicit concept that American workers cannot compete in a "global village". Historically this is utter nonsense and anyone who has been outside of the geographic borders of the United States for any period in excess of fifteen minutes knows it to be such. Our work ethic is viewed as fanatically obsessive by most of the peoples of the world and you have to visually watch nine Japanese workmen all focused on changing a single light bulb in a poetic ballet of teamwork to really get the feel for what an American at work means. Some of our large city labor unions have tried to duplicate this idiocy but they just don't know how to really put the feathers in the bed the way the Japanese do.

The secret to the Japanese success has not been their work force. It's been management leadership. They are quite willing to take a long view of profits, develop markets and products, and in general LEAD. American management is currently focused on learning to COMPLAIN, and manage public relations. Success is rated by how successful you are at passing laws guaranteeing you a market and locking everyone else out. Look at American telephone companies' current position of holding hostage a technology (ISDN), quite needed by our nation's economy to compete. U.S. West, for example, is demanding triple the price they currently deliver analog service for, and actually going to some expense to CRIPPLE the inherent data capabilities of the service unless you agree to pay MORE YET for the service. ISDN will die before it's born as a result. Our manufacturers and businesses will be denied a communications capability they need, and U.S. West won't make the fortune they easily would have if they had they had enough sense

to get in out of the rain. And somehow, some way, it will be the fault of the Japanese in the minds of these Neanderthals in suits. That the universal conversion from current analog services to digital DOES represent increased value and inevitably would dramatically increase their profits is completely lost on them. They insist on an exorbitant profit on the very first line installed.

More upsetting is the overt "Japan-bashing" that seems to be quite mindlessly in vogue currently. I heard on National Public Radio this morning that a troop of girl scouts in California were having difficulty peddling their cookies this year. It would seem that most of the little scout-ettes were of Japanese ancestry, and despite their status as native-born Americans, people were actually turning them away informing them they would prefer to "buy American" on the cookies this year. Some days I just want to burn my clothes, insist they just pulled me frozen from a glacier and thawed me out, and I don't know what the hell is going on.

In any event, I would deeply appreciate a mailing list of all those Canadians that have bought into the idea that is in their interest for their businesses to be owned by companies in the United States. With a little vision and some hard work, I can probably turn it into a gold mine.

Jack Rickard

Dear Mr. Rickard,

I'm writing to appeal to you to remove the graphic from the ad for the Lifestyle BBS in your magazine.

In the year that I have been reading your magazine, I have found it to be a delightful mixture of technical information and thoughtful analysis about where electronic online information and technology is heading. Your promotion of the Electronic Frontiers Foundation's efforts to ensure democratic access to America's electronic highways and to freedom of information are laudable. Your defense of freedom of choice for gays and lesbians through your defense of "The Backroom" BBS ad in your magazine lead me to believe that you could see my point about the "Lifestyle BBS" ad.

If you really believe that electronic information technology should be democratically accessible to all, then why would you make your magazine a forum for information exchange where half of the world's population will feel uncomfortable.

This is not a freedom of information or a freedom of choice issue. This ad depicts the ankles of a woman shackled in handcuffs hanging upside down from a steel cable. Would you like to see the women that you care about subjected to this kind of treatment? I know my wife and daughter wouldn't want a relationship with a man who would want to do this to them. Do you know or can you imagine ANY woman willingly wanting to have this done to them. I believe this graphic pushes the ad over the line between pornography and hatred against women and well beyond the line between erotica and pornography.

Rather than reject my appeal on the basis of freedom of information and lifestyles, why not accept a challenge to change the attitudes of the thousands of sysops who run systems that carry hundreds of pornographic .GIF files which belittle women as mere objects of male domination.

As a man concerned about domestic violence in our society, and as an engineer, I was deeply disturbed on December 6, 1989 when a man killed fourteen women at an engineering faculty in Montreal just because they were women. I believe that women have the right to safety in the streets and in the home, to be treated as equals and not as objects, and to challenge male efforts to treat them as objects. I believe men have the responsibility to take "no" for an answer, to speak out against sexist behavior, to challenge men's anger towards feminists, to share housework and the care of children, to reject pornography that treats sexual relations and gratification as a tool of power rather than as a mutually rewarding experience shared by a man and a woman.

I believe we need to listen to women like Anita Hill, who feel increasingly endangered and marginalized in our society and are prepared to speak out about seemingly trivial incidents of sexual harassment, which taken in their entirety diminish their quality of life.

We must also listen to the millions of other women who have not had an international platform to express their concerns and fears. I was told by women in South Africa last summer that the next war in that troubled country will be the gender war. As a lover of peace, I don't want to see that happen, but as a lover of justice, I know which side I'll be on if it comes to that.

The world will be a safer place if this issue can be raised sensitively and men's attitudes can be changed without making them feel defensive and disempowered. Men and women's lives will be the richer for it and our wives and daughters will be safer. Bringing women into the online world in far larger numbers will greatly enrich the information and experiences to be shared through use of this technology.

Please remove the graphic from the "Lifestyles BBS" ad for all of the above reasons.

Yours sincerely,

Bob Thomson
AlterNet Communications
bthomson@web.apc.org

Bob:

There was nothing in those positions to lead you to the conclusion that I could see such a point - and I don't. I won't go into all the areas where I agree and disagree with your long suffering position on "women" in general and the more general implication of their treatment at the hands of the "beasts." Those parts that weren't obvious, were at least redundant.

I never defended freedom of choice for Gays. I said it wasn't any of my business. I did go on to say that sexual orientation was irrelevant online and further wildly irrelevant in Boardwatch. Until we develop the peripheral technology to consummate the act electronically online, it will remain so. Personally, I've recently come to believe homosexuality is probably a biological dysfunction with organic causes (good Jack...THAT will cause some mail) and as such, it probably isn't a matter of choice at all. This places all discussions of sexual

orientation in a bit different context and one that I haven't entirely thought through yet to tell the truth.

I will say that I've been expecting something along this line. Most of the classically tagged and badged "liberal" herd mentality are all for freedom of speech where it protects what they want protected, and vigorously opposed to freedom of speech where the speech doesn't hold to the party line. I believe the code word is "politically correct". I find this inconsistency mildly nauseating, however predictable. Frankly, I was curious as to when and where the other half of the equation would rear its head. I confess some bemusement that it would be over a quarter-page ad depicting spike heels and handcuffs, but whatever. My position on anything doesn't obligate me to take a different position also held by those who agreed with me on the first one. And it always startles me when someone assumes it does.

I do think the online world becomes richer as more gain access to it and it should be as accessible to all as we can achieve. I couldn't possibly care less as to who is "comfortable" with it.

Your entire argument assumes the women on the BBS in question are not participants in this game of bondage. And it's a dubious proposition whether such activities are actually occurring - given Lifestyles is advertising a bulletin board system - normally an activity for people using modems - not leather. Your assertion that no woman would want to be treated that way unfortunately ignores reality. As I've said before, just because you and I don't get it, doesn't mean it isn't there to be got. It is my understanding that there are people of both sexes who do enjoy such shenanigans. All those who don't can form a mass movement to ignore the Lifestyle BBS and vehemently and vigorously not dial it. And your allusion to a connection between this image and an actual serial murder is horrifying - however transparently strained. But the bottom line is if one of my daughters wants to hang some hapless yuck up by his ankles and call him up on the telephone with a modem, she can have at it as far as I'm concerned.

I disagree with most of your apparent views of feminism, and probably lean more to the Rush Limbaugh view of what he terms "FemiNazis." Aside from myself, my household is ALL females, and my strategy for dealing with it is to work a lot. I found Anita Hill transparently deceitful, manipulative, and opportunistic and I can't believe you bought into that line of artless BS. On the other hand, I found Judge Thomas transparently deceitful, manipulative, and opportunistic. In fact, I found most of the Senate Committee transparently deceitful, manipulative, and opportunistic. Where the FemiNazis find a hero in all this is beyond me. I'm fascinated by all the Democratic Party presidential candidates lining up to swear "they believed Anita."

I find nothing even mildly obscene or pornographic in the Lifestyles ad - period. I don't believe anyone on the BBS in question actually has to hang from the rafters to qualify for a password. I can only believe this ad would be offensive solely to those desperately in search of something to be offended at. The advertiser is undoubtedly thrilled his tiny ad gained so much of your attention.

All that said, I'm curious. How do you know those ankles are a woman's?

Please convey my best regards to your entire planet.

Jack Rickard, Editor

Dear Jack:

Just recently received the January/February 1992 issue of Boardwatch magazine. Information regarding tossing of Fido style messages on page 45 is inaccurate. The reference to using a utility called TomCat! for the tossing and extracting of messages is incorrect. TomCat! only tosses/extracts messages from Wildcat! and puts them into **.QWK** style packets for distribution via a **.QWK** style network, not Fidonet as stated.

Since we are the authors of the product that does perform the tossing/extraction of messages along with being alpha testers for WildCat! BBS software, I felt compelled to clarify this. The name of this program is called WILDMAIL! and it's current release is v2.01. It's presently available on a 30[-day] evaluation basis and can be downloaded from just about any of the Wildcat! BBS systems across the country. WILDMAIL! carries a $45 registration fee plus a $2 shipping and handling charge. Voice support is available during normal business hours by dialing (510)687-1122 or via our support board at (510)687-0236 (USR D/S).

This is the first tosser ever written for Wildcat! V3.xx to actually make direct use of the message base for mail processing and allows for seamless integration of both Fido style Netmail and Echomail messages in and out of WC30 message bases. A number of earlier products involved a more complicated 3 or 4 step process to handle mail and often required a masters degree to get it all working.

On an entirely different note, just wanted to say I enjoyed the speech you gave at the Wildcat! SysOps Convention in Bakersfield awhile back. Both my partner Derek Koopowitz and myself attended the conference and gave presentations on various aspects of BBS use including FidoNet style mail handling. Thanks for your time and we enjoy your magazine.

Sincerely,

Joseph A. Martin
Senior Partner
Online Computer Resources

Dear Joseph:

We stand corrected on our error and doubly disconcerted in that I did sit in on your very informative presentation on WILDMAIL! in Bakersfield. I do thank you for writing to correct it as it may be of crucial interest to Wildcat! operators not yet connected to FidoNet.

I suppose it would be to much to ask that you develop a similar Internet interface package for Wildcat! and present it at ONE BBSCON this coming August 13-16? WILDNET!? INTERCAT!? CATNET!? WILDRFC-822!?

Jack Rickard

TELE-BITS

RUMORS, MIGHT BE'S, NUMBERS CAUGHT IN PASSING

We remain addicted to public television. Despite a growing trend toward political commentary and war history presentations, there are still enough carpenter ants and frogs on the air to hold our interest. One of the leading producers of PBS fare is WGBH of Boston. They've been at work on a series on personal computer technology for nearly a year they've titled THE MACHINE THAT CHANGED THE WORLD. This five part series examines the personal computer revolution and deals with the online world fairly extensively. The series includes a visit to Dave Hughes Sr. in Colorado Springs Colorado and a tour of the areas high-tech online community. The series airs April 6th on most PBS stations and will continue each Monday evening for five weeks. What's next Mr. Hughes? A spot on CBS's 60 Minutes?

Look for a legislative battle royal in Congress over re-imposing limits on RBOC information service activities. Rep. Jack Brooks (D-Texas), chairman of the House Judiciary Committee, called a hearing to get industry views on whether the original Modified Final Judgment restrictions, recently overturned by the court system, should be codified into law. He indicated he was preparing a bill to ban Bell entry into information services. AT&T and most of the newspaper industry lined up behind such an effort. Cox Newspapers testified that Bell South had inaugurated an online service with a 3-digit telephone number in Atlanta and had refused to provide Cox a comparable connection - demonstrating rather immediately that Judge Green's concern over the predatory behavior of the RBOC were well founded. The RBOC have moved in with millions in lobbying money and are blatantly threatening Congressional Representatives with radio advertising smear campaigns in their home districts. It would appear this has NOT had the intended effect and Congressmen who really didn't care one way or another about the Bells are closing ranks to join the fray against the Bells. Several have complained about the Bell's behavior. You can obtain copies of Congressional bills by calling the House Documents Room at **(202)225-3456**.

After rocking the modem market with a new low price point for **14,400 bps V.32bis** modems ($249.95 to sysops), SupraModem has apparently recalled all shipments of their SupraFAXmodem V.32bis and V.32 models. The modems would not reliably make the V.32bis connection and rumor has it that the Rockwell chipset the modem is designed around has some pretty egregious problems. Supra claims they'll be shipping again by March 15, but they didn't sound terribly convincing.

The low cost X.25 network **ACCU*LINK** we reported on in the December 1991 issue has apparently joined the ranks of deceased ventures. The network, based on the CompuServe X.25 network, is no longer operating and their 800 number is disconnected. There is an undying desire by BBS operators and callers to somehow find a work around to avoid paying long distance telephone charges. But nearly everyone who has touched X.25 has found it to be the kiss of death. The equation involving costs, performance, and caller convenience always devolve to the same result - it doesn't work for bulletin boards. In the long run, I don't even think it will work for the commercial services that have so far used it to apparent success. We're inclined to declare X.25 a closed issue of no further interest to the BBS community.

Who was the first person to fly? Like many things, it depends on your definition of the word. In **1783**, a French doctor named **Pilatre de Rozier** made the first balloon flight and so, in the minds of many, was the first to become airborne without it coming to a poor end.

As of Christmas Day, Prodigy claimed to have **1.25 million** subscribers - **60%** growth over a year earlier.

Intel is developing a little bitty modem we hear. The new model will offer a modest 2400 bps connection, but it will be 3.5 X 2 inches in size and just two-tenths of an inch thick. The new model is designed to fit into the Toshiba T2200SX and T3300SL laptop computers.

IBM and Microsoft's falling out may lead to the first real competition in operating systems for personal computers in a number of years. One of the most obvious reasons for the failure of OS/2 version 1.0 had nothing to do with its function. It was simply overpriced with a basic package starting at over $300 and the "real" works for over $800. The company seems to desire to avoid this with the pending release of 2.0. They let it be known they were thinking of selling the new version of OS/2 at a price of **$49.95**. Microsoft immediately responded that the 3.1 version of Microsoft Windows would be priced at **$49.95** as well. IBM is now seriously talking about GIVING AWAY OS/2 to all who want it and doing upgrades via BBS. We don't know what Microsoft's response will be - free Windows and we'll up you one Word for Windows package? In any event, don't discount OS/2. Beta testers claim to be appropriately wowed by the new package despite it's 25 MB hard disk signature. The sudden application of two powerfully graphic operating systems at essentially no cost could change the face of the PC world within months. And despite a poor history so far, OS/2 still holds some promise for multi-line BBS operation in the future - Windows less so.

Stevens Aviation Inc. of Greenville, South Carolina and Southwest Airlines of Dallas, Texas both used the term "**Plane Smart**" in their advertising. Both companies probably incorporated the term independently, but it seemed headed for litigation in any event. Stevens Chairman Kurt Herwald decided to take the bull by the horns and challenged Southwest Chairman Herb Kelleher to an arm wrestling match to settle the dispute. Kelleher agreed and the best two out of three falls gets the slogan. Lawyers for both firms were reportedly deeply wounded by the exchange.

A survey by Plog Research, Inc. indicates **56%** of consumers have at some point given up trying to reach a company because of the frustration of dealing with voice mail systems. About **85%**

of the Fortune 500 have gone to voice mail and the vm business is growing at **20%** per year. But a backlash is beginning to develop as difficulties dealing with these audio bulletin boards grows. A number of companies in the banking and financial industries are just abandoning them altogether - they appear to cause them to lose business.

And finally, a Happy Birthday to those who have them. You may hear a particular song on the anniversary of your birth. The song ***Happy Birthday to You*** was originally written by a New York teacher named **Patty Smith Hill** with music by her sister, Mildred J. Hill. The song was originally "Good Morning to All", later revised to reflect today's universal birthday wishes. It was published in **1935**.

TELEPHONE STUFF

PacBell has asked the California Public Utilities Commission to approve rates for its switched 56-kilobit-per-second data service. Installation of **Switched-56** would be priced at **$500** with a **$45** monthly service charge. Usage charges would be at standard voice rates. PacBell plans to introduce the service toward the end of March.

PacBell is also developing an online information service for California Schools. Termed **Knowledge Network Gateway**, the service will provide schools with high-speed access to the Internet. Tests this year with widespread availability in 1993

Southwestern Bell Telephone is testing a new billing option titled **Bill Plus**. A dozen business users in Kansas, Missouri, Oklahoma, and Texas will receive their telephone bills in electronic form on diskette. The test will run as a four-month trial and the company has alluded to a future trial where companies can dial up by modem and download their bills.

NYNEX has hastily introduced an online yellow pages service. Using the Minitel technology that failed in their INFOLOOK gateway fiasco, NYNEX is putting up the contents of 300 yellow page directories comprising 1.7 million listings under some 7000 headings. The service is priced at **$0.61** per minute or **$36.60** per hour - good work if you can get it. More info from **800-35NYNEX**.

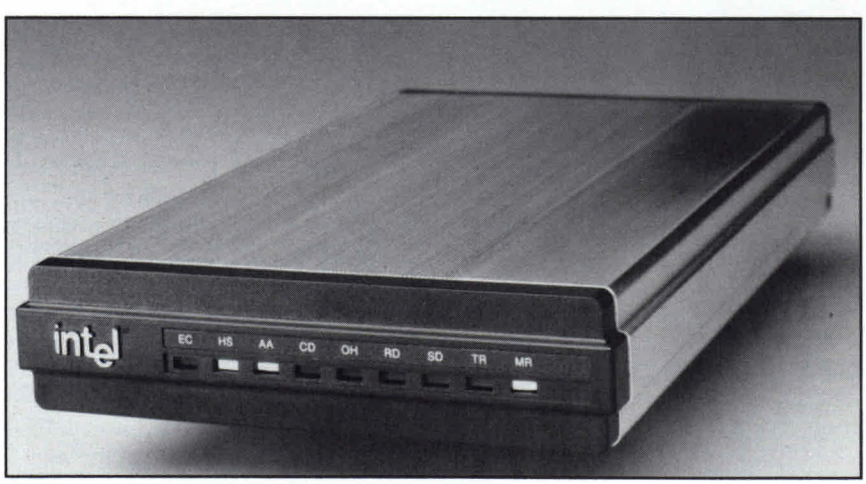
BellSouth is setting up an online system in the Atlanta area where callers can enter actual orders to local businesses. Apparently they've lined up **630** Atlanta businesses.

The local telephone companies desperately want to be in the long distance business. They approach this from two directions - through courts/Congress to be freed from the Modified Final Judgment provision barring them from offering long distance service, and secondly through attempts to be able to charge metered rates for local telephone service. They have actually enjoyed some success with the latter ploy in areas such as Washington DC, Chicago, and Los Angeles where local calling areas are very small and calls just a mile or two down the road incur a per-minute charge. But that may be ending. Several states are looking at legislation banning the practice. Indiana Governor B. Evan Bayh signed a bill in February banning telephone companies from offering mandatory local measured service within the borders of the state. The ban is effective through July 1995. Maine and Oregon already had such laws on the books and other states are looking into it.

INTEL INTRODUCES NEW FAX/MODEM LINE

Intel Corporation has announced a new line of fax modems - including both internal and external models that combine high speed (14,400 bps) data operations with fax capabilities. The Intel model **400e** provides V.32bis data capabilities at 14,400 bps, as well as 14,400 bps Group 3 fax in an external modem package at a list price of **$549**. It also features the usual V.42bis error correction/compression function now standard on virtually all new modem introductions. It will be available in May, 1992.

The **$499** internal model **400** will be available in April and includes essentially the same features. Intel is going to some effort to integrate the new FAX/modem packages with fax software, and has historically been the most successful at doing that. The Intel/DCA **C**ommunicating **A**pplications **S**pecification (**CAS**) is the closest thing to a software interface for fax to enjoy some widespread application. Now Intel is talking about **WYPIWYF** - **W**hat **Y**ou **P**rint **I**s **W**hat **Y**ou **F**ax that emulates the Hewlett-Packard Laserjet Series II and III printers - including PCL level 5 support. What this means is that both DOS and Windows applications can fax their output simply by printing it. The Intel software intercepts the print



New Intel 400e 14.4 kbps Fax /Modem

SYSOP MODEM DISCOUNT PROGRAMS V.32 AND V.32bis MODEMS

Vendor	Support BBS	Sysop Price	List
ATI V.32	**(416)756-4591**	$350	$699
Cardinal 9600V42 V.32	**none**	$269	$699
CompuCom V.32bis	**(408)738-4990**	$329	$539
CompuCom V.32	**(408)738-4990**	$229	$339
Galaxy Networks UFO V.32bis	**(818)998-1758fax**	$299	$999
GVC SM-96 V.32	**(201)579-2380**	$379	$695
Hayes Ultra 144 V.32bis	**(800)874-2937**	$599	$1199
Hayes Ultra 96 V.32	**(800)874-2937**	$399	$999
Intel 14.4EX V.32bis	**(503)645-6275**	$399	$699
Intel 9600EX V.32	**(503)645-6275**	$299	$599
Multi-Tech MT932EAB V.32	**(612)785-9875**	$449.50	$899
Practical Peripherals PM9600SA	**(818)706-2467**	$339	$399
SupraFAXModem V.32bis	**none**	$249.95	$399.95
Twincom 9600 V.32	**none**	$279	$299
U.S. Robotics DS V.32bis	**(708)982-5092**	$499	$1295
Ven-Tel V.32	**(408)922-0988**	$499	$899
Viva 9624e V.32	**(805)499-9649**	$350	$649
ZyXEL U-1496E V.32bis	**(714)693-0762**	$370	$695

function and redirects it as a fax transmission. This would eliminate all the conversion headaches to take current output files, convert and fax them and reduces the process to one step from within any application. We're for that.

One minor hangup. The new line apparently uses the same Rockwell chip set currently causing Supra difficulties. Intel may not ship quite as soon as they had planned. Intel PC Enhancements Division, 5200 NE Elam Young Parkway, Hillsboro, OR 97124; **(800)538-3373** voice; **(800)525-3019** faxback; **(503)645-6275** BBS.

GOVERNMENT PRINTING OFFICE BBS TO CONSOLIDATE FED BOARDS.

The Federal Government operates more electronic bulletin boards, for more purposes than any other single entity. They are also the nations largest printer. The task of disseminating information to the world regarding government programs and activities in the United States dwarfs the gross national product of a good percentage of the nations on the planet. The government operates so many bulletin boards now that just surveying what's available has become a task in itself. A proposal for an all encompassing government BBS, run by the Government Printing Office, is wending its way through Congress. H.R. 2772 calls for a **G**overnment **P**rinting **O**ffice **W**ide **I**nformation **N**etwork **D**ata **O**nline (**GPO WINDO**) system.

The GPO WINDO Act, introduced by Rep. Charlie Rose (D-NC) on June 26, 1991, would establish online access to public government information through the Government Printing Office (GPO). This GPO Windo would be a single account, one-stop-shopping way to access and query federal databases, complementing rather than supplanting other agency efforts to disseminate information. It would not be an exclusive method of dissemination. Its purpose is to make it more convenient for the public to obtain low-cost access to government information by dialing a single "gateway" number.

The databases and documents offered through the GPO WINDO would initially consist of a group of core databases, which will be expanded as the system matures. Core data would likely include services such as the Federal Register, Congressional Record, Economic Bulletin Board, National Trade Data Bank, MEDLINE, the Department of State Dispatch, agency and White House press releases, CENDATA, DOE Energy, AGRICOLA, FEC Campaign Contributions, NTIS Research Abstracts, U.S. Supreme Court opinions, and many others.

These choices would include online services already offered by GPO to selected depository libraries and those that are currently available through commercial vendors only. The long-term goal is to provide online access to as many federal databases as possible, limited only by technological and costs constraints.

A good bit of government information is made available electronically to a small handful, or in some cases a single commercial vendor, who then sells it to the public at a hefty surcharge. This has caused a lot of anger among those who need the information, and maintain that they've already paid for it once through taxes. Government agencies defend the practice, citing the difficulties in providing public access to individuals. It's just easier to provide it to a single vendor and let them distribute it.

The information available through the GPO WINDO would be priced for most subscribers at approximately the incremental cost of dissemination, and provided without charge through the depository library program.

For more information on the GPO WINDO, contact the American Library Association, Washington Office, 110 Maryland Ave. NE, Washington DC 20002; **(202)547-4440** voice; **(202)547-7363** fax; Bitnet: **NU_ALAWASH@CUA**; or The Taxpayer Assets Project, Washington Office, P.O. Box 19367, Washington, DC 20036; **(202)387-8030** voice; **(202)234-5176** fax; Internet: **508-0621@mcimail.com**

U.S. ROBOTIC'S SALES UP 46% FOR FIRST QUARTER

U.S. Robotics, Inc., (NASDAQ:**USRX**) announced its financial results for the first quarter of fiscal 1992, ending January 3, 1992.

Revenues for the quarter were **$24.9 million**, a **45.5%** increase over the **$17.1** million of the previous year. Net income for the quarter was **$2.3 million**, up **59%** from **$1.5 million**.

Notable was a **76%** increase in overseas sales to **$7.2 million**. USR raised **$28 million** in their first public stock offering last fall. The company has **10,648,000** shares outstanding and earnings per share for the period were **$0.22** per share.

WILDCAT! SHAREWARE CD-ROM AVAILABLE

Digital Publishing Company of Golden Valley Minnesota has released a CD-ROM as of February 24, containing the test drive version of the Wildcat! BBS software along with some **4921** shareware files. The **Wildcat! Gold** CD is the latest in the company's Golden ROM Series that started with the release of Shareware Gold in 1989.

The new CD title basically comprises a BBS on CD that allows the user to install and bring up a functional Wildcat! BBS complete with 25 shareware file directories with slightly under 500 MB of shareware already categorized with descriptions and available for download. The CD also contains documentation files and conversion utilities to make it easy to transition to a registered version of Wildcat!. This is virtually a BBS in a box. Insert the CD in a CD-ROM drive, change drives to the CD-ROM, and enter **WCINSTAL**. The install program will take you through the steps to bring up a complete BBS in less than a half hour.

Ron Woods, sysop of **Freezing Point Systems BBS (612)944-3358** worked with Digital Publishing on the file selection. Mr. Woods serves as the home system for the Wildcat Distribution Network, a network that distributes Wildcat! utility files, third party shareware add-ons, and other BBS related files to a number of BBS around the world. Freezing Point is **1:282/85** in the International FidoNet.

Wildcat! Gold is priced at **$179** and discounted to **$129** for registered Wildcat! system operators. A special introductory price of **$99** expires March 31. Mention you heard about it in the April issue of Boardwatch and owner Duane Franke said he would extend the **$99** special till April 30 for Boardwatch readers. Digital Publishing has another popular title they introduced a couple of months ago titled **Windows Gold** with 400 Windows programs at **$179**. Contact Duane Franke, Digital Publishing Company, 8100 Wayzata Blvd., Golden Valley, MN 55426; **(612)595-0801** voice; **(612)595-0802** fax/BBS.

PRACTICAL PERIPHERALS DROPS MODEM PRICES

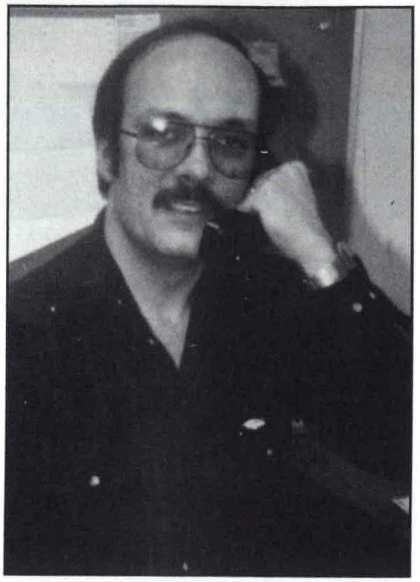
Practical Peripherals has announced price reductions across seven modem models. Most notably, the **PM9600SA** V.32/V.42bis model was reduced from **$699** list to **$399**.

The company is also introducing a new **PM14400FXSA** model at **$549**. The new modem features the 14,400 bps V.32bis connection with FAX - thus joining the latest crop of modems using the Rockwell V.32bis/FAX chip set. The most unusual thing about this latest model is that it has the ability to detect credit card "bong" tones to assist in phone credit card dialing. It can also convert telephone numbers that spell things (800-FXMODEM) to their numeric equivalents. Practical Peripherals is a subsidiary of Hayes Microcomputer Products. Practical Peripherals, 31245 La Baya Dr., Westlake Village, CA 91362; **(818)706-0333** voice; **(818)706-2474** fax.

BBS SOFTWARE FOR MAIL-ORDER HOUSES

by David Hakala

One area of the online world yet to reach its full potential is online shopping. The ability to dial up a service, logon, order a product, and make it show up on your doorstep a few days later offers a level of shopping convenience unavailable through any other medium. But so far, online shopping has fallen a little short of its promise. One obvious need is the ability to look at graphic images of products online.



David Hakala

A relatively new BBS/online product titled **Electronic Ordering Network** (EON) offers some promise. EON is basically an OFFLINE database that callers use on their own machines to search through catalogs containing thousands of items, view **.PCX** images of the product, and select items for order. The program dials into a remote host to actually order the item, pass electronic mail questions or requests, and automagically update the catalog with any recent additions or changes - all via a very short telephone call.

This news is good for everyone except long-distance carriers. What offline mail readers have done for electronic mail, EON Corp. bids fair to do for electronic shopping. The connect-time bottleneck has been broken. Buyers can browse at leisure without running up toll charges or running out of time. Sellers can offer hundreds of thousands of items, include full-text descriptions and even PCX color graphics of their wares, without buying dozens of phone lines, modems, software licenses, etc., to accommodate half-hour online shopping sessions.

EON Corp. takes its name from its flagship software, the Electronic Order Network. Like offline mail readers, EON consists of a host module and a remote user module. The host module includes the ability to manage product databases, customer files, and e-mail traffic. The remote module includes a database

Convenience of Payment

What if McDonald's, the hamburger company, had tried to get started this way:

You're out cruising in your '57 Chevy, and an interesting looking new hamburger stand catches your attention. You drive up, and a waitress appears. She asks for your name and password. You have none, so she explains that, in order to buy hamburgers, you must register in advance, and make a minimum payment by credit card or mail. This will entitle you to a certain number of hamburgers per week. Each time you want a hamburger, you simply give your name and password, and the appropriate "hamburger credits" are deducted from your account. When your hamburger account starts to run low, you will be alerted to buy more, or, you can arrange to have your credit card automatically billed.

Would you have bought a single hamburger this way? Would anybody? Yet that is exactly what the online world has asked its customers to do... until now.

Breakthrough Billing Service = BBS

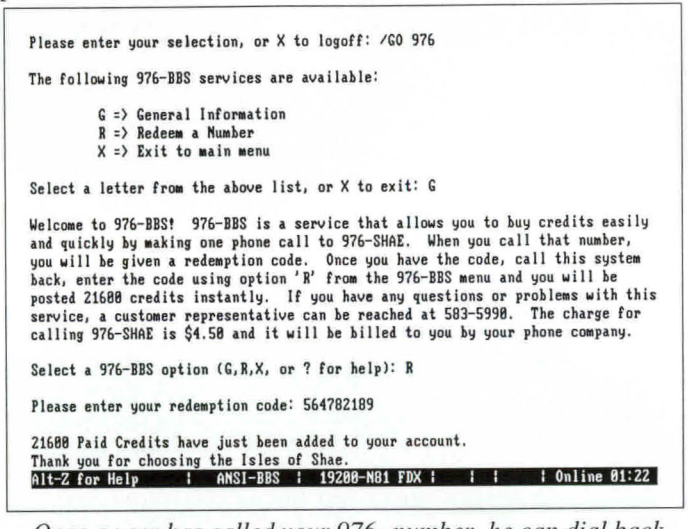
The convenience of cash is taken for granted in everyday business transactions. You want a Coke — you drop a coin in a machine. You go to a movie — you fork over the cash, they hand you a ticket.

Online services can't work that way, because the customer is not physically present at the place of business. It's not that he doesn't want to fork over the cash, or that he considers it too expensive. It's just that the logistics of getting the cash out of his pocket and into yours are too awkward. Credit cards are no good for several reasons:

- Many people may be reluctant to give you their credit card number for fear of hackers
- Many teenagers who use BBS's don't have credit cards
- Banks are highly distrustful of credit-card-over-the-phone types of businesses, which makes it hard to become a "merchant"
- The low dollar amounts per sale make the overhead of filling out slips or phoning for validation a large fraction of revenue

Billing your customers doesn't work either. Many of them will put off paying your bill — but they will feel guilty about it, so they'll put off calling your system until they get around to paying your bill, but they never get around to paying your bill — and the net result is that you lose both the money and the customer.

The answer is a 976- or 1-900- number. The customer can call an automated voice synthesis machine, which reads off a number to him. He then calls your BBS and punches in the number. Presto! Instant online time! The charges appear as a small additional amount on his phone bill at the end of the month.



Once a user has called your 976- number, he can dial back into your BBS and redeem his code. On the Isles of Shae, where this software was tested, 976-SHAE became the preferred method of payment almost immediately.

People always pay their phone bills — or they don't have phones. You get paid directly by the phone company, so you don't have the hassle of filling out long deposit slips or chasing down bad checks. And your customers can buy online time from you "on impulse", with no inconvenience or delay. Your own time is freed up, since you don't have to get involved in the day-to-day posting of credits and management of accounts. And best of all, new prospects can give your system a try — as full-fledged paying customers — on their very first call.

Here's How It Works

You'll need a second computer, a 976- or 1-900-number, and the Galacticomm 976-BBS™ package. (We assume you are running The Major BBS® with full source code licenses or you wouldn't be in this business.)

You take the online "module" part of the 976-BBS software and add it to your MAKETSYS file. You install the Talking Technologies Powerline II card (which comes included in our 976-BBS package) in the second comput-

er, along with our voice-configuration software. You use any ordinary telephone handset to "program" the system with your particular header/trailer messages ("Hello, thanks for calling the XYZ BBS credit service..."), the digits in your own voice, and so on.

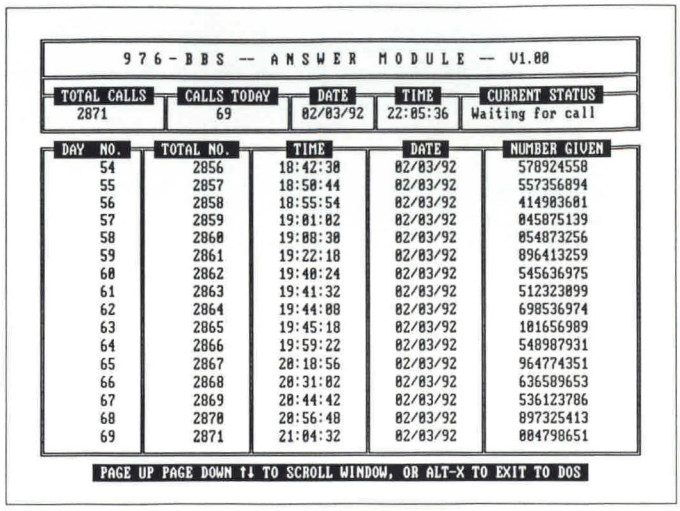
This second computer doesn't have to be at the same location as your BBS — you don't need them hooked together over a LAN or a dedicated phone line. Instead, the 976-BBS software uses a proprietary, dual-password scheme that allows the voice-server and the online redemption mechanism to generate the same sequence of codes. The security architecture also guarantees that each 976-BBS package will generate its own unique code sequences. And the odds of someone guessing a valid code are less than one in ten million.

At this stage, you will need to determine how much you're going to charge for each call and how many hours of online time a user will get for a valid redemption code. You'll probably want to keep the charge reasonably small (between $4 and $8). If you charge too little, your users will get annoyed at having to keep calling the 976- number to get more credits every hour (also, if your phone company gets a certain minimum amount per call, this will cut into your profit margin). If you charge too much, however, people with think twice before picking up the phone.

You should check your local tariffs to make sure your messages contain any necessary disclaimers (e.g., "each call will cost such-and-such plus toll, if any", "if you're under 18 you must get the permission of a parent").

Next, you configure the online module. What's the 976- number users should call? What voice phone number should they call if there's a problem? How much will they be charged for each call? How many credits will they get? You can also configure the number of attempts a user can make to redeem an invalid code before being automatically logged off. Anytime a user is logged off for trying to redeem a false code, a message is generated in the Audit Trail, alerting the Sysop.

Now, plug your 976- line into the back of the Powerline II card and fire up the voice-server software. You'll be able to see calls as they come in, and you can use the arrow keys to scroll through a history of all



The 976-BBS server software uses a voice synthesis card to present callers with their redemption codes.

redemption codes given out, each one time and date stamped. Last step: activate your Online Redemption Center and announce to the world your new breakthrough billing service!

Just a Phone Call Away...

Imagine how much easier it will be for a first-time caller to join your BBS:

It's 10 PM. You decide to call a new BBS you've just heard about. You log on and are told that this is a pay-for-play system, but you are invited to try a free demo. You enter the teleconference, and WOW! There's a small group playing poker, a heated debate over the last Superbowl, people hugging each other. Someone whispers a private hello to you, and you get involved in a discussion with someone you knew in school. Suddenly, you get a message that your free demo time is up, but you can call a 976- number to buy another 4 hours of time for $5. You quickly pick up the phone and give it a call. Two minutes later, you've logged back on, redeemed your code, and returned to your conversation. What a cool system!

Give us a call at 305-583-5990. Soon you can concentrate all your efforts on making your BBS the best it can be. And once a month, deposit those checks from the phone company.

GALACTICOMM

Galacticomm, Inc. 4101 S.W. 47 Ave.
Suite 101, Fort Lauderdale, FL 33314

Modem: (305) 583-7808
Fax: (305) 583-7846
Voice: (305) 583-5990

search and report engine, ALL of the supplier's product data, an e-mail editor, and communications software to automate connections with the host. Here's how it all works:

The supplier/mail order house uses EON's built-in utilities to load his catalog data into a dBASE database, design his display and order forms, and capture vital customer data, including credit card numbers if applicable. The supplier can also incorporate graphics files in black and white or color PCX format, which can be keyed to individual records in the catalog database or displayed as billboard advertisements when the shopper starts the program.

We talked with two EON customers, both of whom had high praise for the ease and rapidity with which they were able to integrate their thousands of products into the EON host and user modules. The result is a catalog on disk. We've seen those before, but the EON software goes far beyond simple text-display and graphic slide shows.

The search functions built into the remote user module are extremely versatile compared to the typical one-way tree structure of most disk catalogs (see following story on Software Club of America). The shopper can build an order line by line, complete with catalog number, product description, price, applicable tax, and shipping charges. At any time, the shopper can view his order form as it would appear if placed right now, add or delete items, save one shopping list and start a new one, print the current or any saved worksheet, even export data in various formats to incorporate into budget spreadsheets, accounting databases, and other software.

But the most fun comes when you are ready to buy. Select the order-placement option, and EON dials up the host system, logs you on, sends any e-mail you may have attached to your order, downloads replies waiting for you, and uploads your latest order, all automatically.

Here's the real kicker for suppliers and shoppers: during each session, the host will update the caller's catalog if the master database has changed since the caller's last session! A ZMODEM download of new records, deletions, and record updates is transmitted to the caller's disk automatically. After the host disconnects, the local EON module updates the local database and displays all items which have changed. The report of changes can be saved to a file and/or printed. A self-updating mail order catalog on disk.

Now, let's step back and look at the big picture -- the psychology of selling -- and what EON does for suppliers who use it.

First, it removes the most irritating pressures of online shopping: slow screen refresh rates, mounting connect time charges, time limits, busy signals, bogged-down multiline database engines. The processing is done on the shopper's own computer, with the phone on-hook.

Second, the EON paradigm lets the supplier put ALL of his product information at the shopper's fingertips. One EON supplier we talked to has three versions of his catalog available, ranging from 3 MB to over 30 MB of text and graphic specifications. The buyer can have full product information on thousands of products always just a few keystrokes away.

Third, EON makes the shopping-to-buying transition virtually seamless. Other disk catalogs involve printing the product description, perhaps typing an order, looking for a credit card, calling the supplier (and usually sitting on hold for a while)... the prospective customer has more time to talk himself out of a purchase than he spent deciding to make one! With EON, the search for the product you want leads inevitably and painlessly to pressing the "Order Placement" key, without ever leaving the program.

Where the typical BBS can handle fifty 20-minute calls per line per day, EON suppliers report they accommodate fifty callers per line per HOUR! Shoppers don't really go online; they shop on their own hard drives and just make the connection to actually transfer data - much like a .QWK mail reader. Buyers usually spend no more than three minutes online per transaction. Now how many phone lines do you need?

The system is designed to be run from a LAN and there are no inherent limits to the number of nodes you can run under EON. And they have run one system with four lines on a single PC under Desqview. The software allows you to configure both IRQ and port address for each port quite flexibly and they achieved four lines without a multiport card by mapping serial ports to IRQ 2,3,4, and 5 using inexpensive two-port serial cards.

Two drawbacks to the EON package as it stands now. It's a bit young. So far, there are a total of six installations running the system and all have been custom tailored by the authors. The second drawback is price. EON Corp. is enormously proud of this software - valuing an installation at approximately $5000 - although they really haven't firmed up pricing for an off-the-shelf version. Instead of pricing by the number of nodes served, they intend to price by the number of customers in the user log. They do offer an evaluation version that includes all manuals and features, but is limited to TWO customers at **$200**. EON Corporation, 630 Santa Anita Street, San Gabriel, CA 91776; **(818)281-8001** voice.

Software Trading Partners launched The Software Club of America in February, using the EON offline shopping/online ordering system described above. SCA offers over **6,000** computer products ranging from printer ribbons to Gigabyte hard disks, at some pretty competitive prices. While anyone can buy from SCA, those who join its buyers' club for **$60**/year get an extra **10%** discount.

SCA's shopping functions are the most robust we've seen in electronic catalogs, on-line or off. You can browse a pick-list of product categories, then select one category for a display of all items. Typing the first few letters of a category's name takes you straight to the nearest match on the pick list, a very thoughtful touch. We chose "modems," of course, and had our choice of **208** different makes and models complete with list prices and SCA prices in about one second. Try that with your copy of Computer Shopper!

WHY SPEND MORE TIME IN LINE THAN ONLINE?

"LAN+MODEM also saves me hundreds of dollars a month in phone line charges!"

- Frank Hinman
Century21

Why waste resources when pooling them is so economical and so easy! LAN+MODEM gives everyone in your department access to your existing modems without installing new phone lines! Employees no longer have to wait in line to dial-out of the network. LAN+MODEM is a software only modem pooling solution at 1/3 the cost of dedicated comservers.

CROSS
COMMUNICATIONS COMPANY

BBS # for free online demo 303-444-9003

303-444-7799 FAX 303-444-4687 For immediate literature by FAX, call our FAX/BACK service at 800-800-4FAX ext. 507

You can browse all the products of a particular vendor using the same pick-list method to choose a vendor. The SCA disk includes the address and phone numbers of each manufacturer represented in the catalog, including its BBS number if any. Press F1 while highlighting an item to pop up the contact data.

If you know the exact name of a product, entering up to the first ten characters will take you directly to it via the "Product Title" search option. Each product has a unique item number, so you can reorder or check for the latest price using the "Item #" search function. The EON software can print, display, or save to disk a report of any search results.

Most disk catalogs stop at such single-variable search options. SCA goes much further by providing a "Filter" function to handle multi-variable searches. For example, we wanted to find all the 9600 bps modems that cost less than $800. Using pick lists, we chose the required fields and relational operators, filled in our qualifying values, and ended up with the filter sentence, "Product Title contains "**9600**" and Your Cost less than **$800**." In seconds, we had our choice of **28** modems. Leaving the filter turned on, we used the Vendor search function to find four Hayes 9600 modems costing under $800.

COMPETITIVE PRICES

The Boca Research 2400 bps v.42bis modem, noted for its agressive **$109** price in our January issue, sells for **$97.02** to SCA members. A Supra 9600 bps V.32 modem was listed at **$216** for members - an attractive discount. Some other modem prices:

VENDOR/MODEL	LIST	SCA
Galaxy UFO v.32	$999.00	$322.00
Hayes Ultra 144	$1199.00	$758.00
Hayes Ultra 96	$999.00	$632.00
Intel 14.4EX v.32	$699.00	$519.00
Intel 9600EX v.32	$599.00	$448.00
Prac Periph. PM9600	$699.00	$449.00
USR DS v.32bis	$1295.00	$750.00

DETAILED DESCRIPTIONS

SCA members pay **$1,185** for a DTK 286-16Mhz Grafika 2A with 2 MB RAM, 50 MB IDE hard disk, eight slots, five drive bays, and a 200-watt power supply. It also includes 1.2 and 1.44 MB floppies, SuperVGA with 1MB video RAM, .28 mm 14-inch color monitor, keyboard, one parallel and two serial ports, mouse and mouse pad. MS-DOS 5.0 and Windows 3.0 are installed on the hard drive.

Higher-powered systems with the same basic features range from $1,794 for a 386-25 with 4 MB RAM, 64k cache, and a 120 MB hard drive, to $2,964 for a 486-33 with 8 MB RAM, 64/256K cache, and a 240 MB hard drive.

All those specs, plus details about chip-sets, BIOS and video ROM, and other fine print came from the disk catalog, another unusual and welcome feature. The freeware disk includes only about fifty such in-depth spec sheets, each averaging about 3 KB. When one joins SCA, he receives disks containing descriptions of another 1,000 items as of this writing. A horde of scribes is writing descriptions for every product in the catalog, so it could eventually swell to 15-20 MB of such valuable data.

Computer systems, with their many components and several sizes or flavors for each, are difficult to compare on price. We'll leave the exercise to the wise guy who always lets us know our readers could have gotten something for less than the prices we report.

ORDER CREATION /TRACKING

Multiple order worksheets can be created, stored and recalled from disk. Each time you select a product, you can add it to the current order in memory or start a new worksheet. You can review any worksheet at the touch of a key, including shipping and applicable sales tax (Indiana residents only).

Reports can include summaries of order worksheets or fully detailed purchase orders including shipping instructions and payment information. The EON software can even export any fields from an order to a dBASE data file, so you can easily tell your accounting software where the money went.

ONLINE ORDERING AND CATALOG UPDATES

"Make it easy for the customer to give you his money" is an obvious axiom too many businesses have forgotten. The SCA folks actually make it FUN to fork over your cash! Still offline, we filled in a screenful of customer data: business address, default shipping address (just type "same" to copy the business address), credit card number, purchasing authority contact.

The software can be set to dial immediately or delay until a user-defined time. SCA includes a toll-free data line for orders, so this option isn't relevant when ordering. E-mail inquiries, catalog updates, and downloads of graphic files are toll calls when submitted without an order, so we probably would delay them to the wee hours of the morning when phone rates are cheapest.

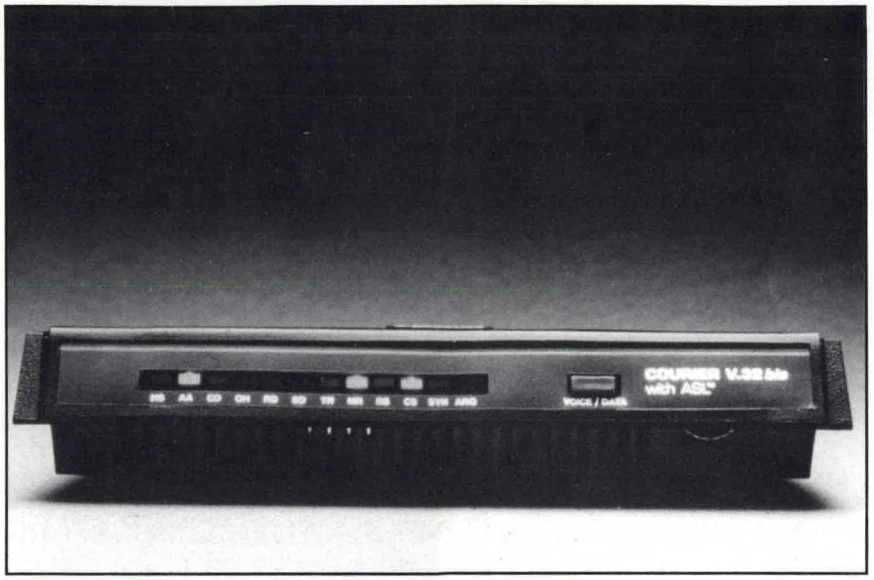
We selected "Order submission" and the fun really began. SCA's 9600 bps modem answered, the software logged us on automatically, and we were cheerfully greeted by name. The remote computer reported there was no e-mail waiting for us, then checked our catalog update status. We didn't have the latest catalog data, so we automatically received a ZMODEM download of additions and deletions. Then our order was uploaded and we were disconnected.

We spent only two minutes online, toll free, and didn't have to press a single key. Immediately after logoff, the program updated the catalog files on our local hard disk and displayed the items which had changed. Folks, it just doesn't get any easier than this!

MEMBERSHIP COST/BENEFITS

There are two prices for every item in the SCA catalog; you can toggle between "member" and "non-member" pricing while viewing items. Member prices average 10% less than non-member prices. A one-year membership costs $60. So if you can identify at least $600 worth of hardware, software, accessories or supplies you would buy from SCA during the coming year, it makes sense to pay the membership fee.

Why have a membership fee and two-tier pricing at all? First, the cost of distributing the SCA catalog complete with megabytes of product descriptions would be prohibitive if every Lookie-



S14,400 BPS V.32bis Courier Dual Standard HST Modem
Contributed by U.S. Robotics for the
Boardwatch 100 Reader's Choice BBS Contest
Two Will Be Awarded at ONE BBSCON

Lou received them. So membership fees hold down prices by ensuring that only the serious prospective buyer gets them.

Second, the membership fee aids the distribution of SCA's freeware catalog, by providing funds from which to pay referral fees. When you install the freeware version of the SCA software, it asks for your initials, phone number, and birth date. This data is used to generate a unique ID code, which replaces the code of the person who gave you the disk. The original code is moved to a new field, so SCA will know who gave you its program the first time you log on.

If you join SCA, the person whose disk you used to install the software receives a $20 check from SCA. Now YOUR code is on that installation disk, so if someone gets a copy from you and joins SCA, you get the bonus.

Subscribers to Boardwatch Online Information service can download the freeware version of the SCA catalog (**SCA_CAT.ZIP**) from the "Reviewed Shareware" section or the "New Uploads" directory. The company is distributing its catalog on diskette and via fine BBS everywhere. Software Club of America: c/o Program Trading Partners Ltd., 7950 Castelway Drive, Indianapolis IN 46250-1979. **317-577-5969** (voice).

BEST BBS CONTEST UPDATE

by David Hakala

We received another **1,536** ballots since our first report, bringing the total to **2,345** votes for **523** different BBS as of today (February 28). The leader has a mere **142** votes, and **34** votes were enough to place in the top ten. The top ten list includes four newcomers who were not in the running last month, and further down the list are some strong contenders. It's not too late to win. The ballot box is open until midnight, July 1, 1992.

This month let's take a look at the communications software voters use and the speeds of their modems. This type of information is helpful to sysops who are planning their modem mix, or writing custom scripts to make it easier for callers to navigate their BBS.

Four communications programs dominate almost **75%** of responses:

PROGRAM	VOTE	SHARE
Procomm	696	29.68%
Telix	553	23.58%
Qmodem	385	14.93%
Telemate	119	5.07%
All Other	592	25.26%

Procomm was the leading package with Telix a surprisingly close second place. QModem, recently purchased by Mustang Software, Inc., placed third with **385** voters using QModem. Telemate, a relative newcomer to BBSland compared to the top three packages, scored a significant 119 votes. All other brands were in the double-digit or lower rank.

Sixty-six percent of voters have a top speed of 2400 bps or less. 9600 bps accounts for **16%** of votes, while **8%** of voters can cruise at 14.4 kbps. As such, it would appear that nearly a quarter of the caller base is capable of a 9600 bps or better connection. Past surveys of various cities indicate about **38%** of BBSs offer 9600 connections and we would expect the percentage of callers capable of making high speed calls to be lower. We found the **24%** figure surprisingly high and expect that to grow over the next six months as truly inexpensive 9600 bps modems become available.

LONG-DISTANCE VOTES

Another item was a bit surprising. Some **23%** of respondents voted for a BBS OUTSIDE their own area codes. BBSing is commonly believed to be a local sport and we were a little startled at the numbers clearly making the long distance trip. Let's make some conservative assumptions and see what that may mean:

- One call per week to one's favorite BBS
- Avgerage call - **30** minutes.
- Average nighttime long-distance costs **$0.12** per minute
- Modem users in United States - 10 million

These numbers translate into an estimated **$35,880,000** per **MONTH** in long-distance revenues, and they aren't even close to complete. Most BBSers call more than one board per week and the 30 minute figure is also intentionally conservative. Our methodology does not take into account toll charges within

BOARDWATCH MAGAZINE

Announces the Boardwatch 100 Reader's Choice Bulletin Board Contest

WIN A FREE U.S. ROBOTICS HIGH SPEED MODEM

Boardwatch Magazine is sponsoring a contest to find the 100 most popular bulletin board systems in North America - and the ONE BBS most popular among callers. The contest will run from January 1, 1992 through July 1, 1992. Winners will be announced at the Online Networking Exposition and BBS Convention (ONE BBSCON) held at the Stouffer Concourse Hotel in Denver Colorado, August 13-16, 1992. The Boardwatch 100 list will be published in subsequent issues of Boardwatch Magazine and distributed in electronic form world-wide.

PRIZES FOR VOTERS

All valid ballots submitted by voters will be entered in a random sweepstakes drawing. As of the opening date of this contest, prizes include two U.S. Robotics Courier V.32bis modems - and more are on the way. Two valid ballots will be selected from all entries and each will receive a free USR modem - the high speed modem used by more BBS operators than any other. Each voter can vote once, for a single bulletin board system. Each ballot must be fully completed, and we will verify ballots as necessary.

HOW TO VOTE

1. Complete this ballot and mail or fax to:

BOARDWATCH MAGAZINE
READERS CHOICE BBS CONTEST
7586 West Jewell Ave., Suite 200
Lakewood, CO 80232
Fax (303) 986-8754

2. Or, dial the Boardwatch BBS at (303) 973-4222 and complete the online ballot provided on the main menu. Balloting closes at Midnight, July 1, 1992. NOTE: Boardwatch Magazine BBS is NOT eligible to win.

PRIZES FOR BULLETIN BOARD OPERATORS

1ST PRIZE

Air fare, hotel accommodations and registration at ONE BBSCON for two is awarded to the system receiving the most votes. Additionally, the system will be featured on the cover of Boardwatch Magazine with an accompanying feature length story about their system and a free full-page black and white advertisement in Boardwatch Magazine for a period of six months. Boardwatch Readers Choice Top Rated BBS plaque to be awarded at a special award ceremony at ONE BBSCON.

TOP TEN

The ten most popular bulletin boards selected by the voters will each receive an award plaque, a feature story on their system in Boardwatch Magazine, a special top ten BBS listing in the magazine, and a quarter-page black and white advertisement in three successive issues. Additionally, they will be listed in the Boardwatch 100 BBS list.

TOP ONE HUNDRED

The 100 bulletin boards receiving the most votes will each be listed in the Boardwatch 100 readers choice BBS list. This list will be published in Boardwatch Magazine and freely distributed electronically on thousands of bulletin boards world-wide.

We held a very rough form of this contest several years ago. It generated less than 1,000 votes to select the top 100 bulletin boards. That means they averaged just 10 votes per board. Your vote can have a tremendous impact on the outcome of this contest!

The Boardwatch 100 Reader's Choice Bulletin Board Contest

TITLE OF BBS YOU NOMINATE AS THE BEST IN NORTH AMERICA:_____

PRIMARY BBS ACCESS TELEPHONE NUMBER:_____

WHY IS THIS THE BEST BBS IN NORTH AMERICA?

_____

VOTER NAME:_____ VOICE TELEPHONE NUMBER:_____

STREET ADDRESS:_____

CITY:_____ STATE/PROVINCE:_____ ZIP OR POSTAL CODE:_____ COUNTRY:_____

COMMUNICATIONS SOFTWARE YOU USE:_____

MODEM MANUFACTURER AND MODEL:_____

HIGHEST MODEM SPEED YOUR MODEM SUPPORTS? [ ] 1200 bps [ ] 2400 bps [ ] 9600 bps [ ] 14,400 bps

AGE:_____ PROFESSION:_____

SIGNATURE:_____ DATE:_____

Sketch of ECHO Sysop Stacy Horn Submitted by BBS Voter

one's area code. Even so, we're talking about **$430,560,000** per year for AT&T, MCI, et. al.

"EXTRA" MODEM LINES

We're kicking ourselves for not including this question from the beginning: "Have you installed an 'extra' phone line just for your modem?" Better late than never. Our online voting booth now includes it, as does the latest edition of our **VOTE4BBS.TXT** electronic campaign kit. So far, **159** people have answered that question, and **31%** say "yes," they've installed another phone line because they have a modem. Installation charges aside, that's a big piece of change for the local phone companies. If this proportion holds true for 10 million modem users, and we assume an average monthly cost of $15 per line, the RBOCs realize **$46,500,000** per month or **$558,000,000** a year in basic service revenues just because people install second lines to call bulletin boards.

Any way you cut it, the telephone traffic in the United States DIRECTLY attributable to bulletin board systems is undeniably in excess of a Billion Dollar per year market for the telephone companies. We find it really odd they are currently attacking local bulletin boards in preparation for introducing their own online services. Despite a number of attempts at gateway's, they've yet to make a DIME from those.

SPECIAL VOTERS

Mail call has become a daily delight since the contest started. Our thanks and good wishes go out to these special people for demonstrating the diversity of the online population:

Our youngest voters so far: John Caplinger (Ohio) & Drew Mannell (Ontario), age **8.**

Our oldest voter: Stephen Morrissey (Florida), age **77**

Voter from the smallest country: Frank Klaess, Luxembourg

We received a faxed vote from the USS Tripoli - Rudy Esperanza. Our most techno-macho voter would have to be Jerry Robinson of Ohio - he lists his modem as "home-made."

We received a vote from a New York caller that included a pencil sketched portrait of the sysop of his favorite board (Stacy Horn of Echo). Another voter advised us she had dialed from the east coast to a chat system on the west coast (Odyssey) to meet her current mate - who lived down the street five minutes away.

Again, all voters are entered into a drawing for one of two U.S. Robotics V.32bis Dual Standard modems. At least two other modem manufacturers have also agreed to provide modems for the drawing, but we had not received written confirmation as of press time. GEnie has added a new account setup and $100 worth of connect time on the GEnie service. Award of modems to voters and award plaques to the top ten bulletin boards will be made at the **Online Networking Exposition and BBS Convention** (**ONE BBSCON**) in Denver August 13-16, 1992.

We continue to receive inquiries from BBS operators who show an unending desire to "help" their callers vote. Operators can provide anything they like TO the voters to inspire them to vote. But they cannot handle ballots in any way AFTER they've been completed by the voter. Voters should forward their ballots to Boardwatch themselves, either by mail, fax, or dialing the Boardwatch BBS and completing the online ballot. Boardwatch Magazine, Boardwatch 100 Reader's Choice BBS Contest, 7586 West Jewell Ave., Suite 200, Lakewood, CO 80232; **(303)986-8754** fax; **(303)973-4222** BBS.

THE PROFITABLE BULLETIN BOARD

by Jack Rickard

One of the ongoing problems with bulletin boards involves some intractable economics. The cottage industry aspect of operating a BBS makes them notoriously efficient at delivering the best service deal for the least possible fee. The dynamic is so powerful, that callers can have virtually unlimited access to a BBS for little more than the subscription price of a high-end magazine - and the system still provide an enviable income to the operator.

But one of the problems with this efficiency is that the lower the cost of the service, the higher the percentage of the fee that goes just to collecting it. It doesn't make sense to spend $8 or $10 in time, labor, postage, etc. to bill a BBS subscription fee that may only amount to $50 in a year. We constantly see systems failing at prices like 50 cents an hour, $6 per month, etc. not because their callers won't pay it, but simply because it costs too much to track and collect these micro increments to be worthwhile.

The only medium of economic exchange that has made sense online so far has been Master Card and Visa transactions. The passing of a check by mail is too inconvenient for callers. Using a credit card, they can enter a few numbers and make money go through the telephone wire.

But credit cards have problems too. There are concerns about fraud for both the caller and the BBS operator. And a significant percentage of callers simply don't have credit cards. Systems that appeal to younger callers are particularly vulnerable to this problem.

One alternative that originally looked promising was the **900/976** telephone exchange. Callers would dial a **976**

number to access the BBS and a small per minute charge would be levied against their telephone bill for the time they spent on the system. The telephone company would, in theory, remit this amount to the service provider.

It didn't work out quite that way. Callers do not like to have a meter whirring away in the background while they are online. BBSs could easily deliver their product at such a ridiculously low rate, that the meter would whir very slowly. The vast majority of bulletin boards in this country would be most pleased to receive **3 cents** per minute for access to their systems. And telephone companies typically receive two to three cents per minute for measured service local calls. The result would have been local data services at **$3.00** to **$3.50** per hour with telcos STILL getting half the pie. But in the usual frightfully predictable fashion, the telephone companies didn't really have any interest in playing a straight game. For nationwide **900** number access, telcos typically want **35** cents per minute and for local **976** numbers - **12** cents per minute of the take. It wasn't that they wanted MOST of the pie, they wanted for themselves multiples of any conceivable pie available. Their demand just to provide the connection and billing was a multiple of the value of the service.

The result is that the ONLY **900/976** applications that have made it are of the "hey little girl, wan't some candy" type - sex chat lines. And these are rife with the most despicable creatures on the planet. One mentally retarded man ran up a **$116,000** telephone bill on these services and showed up pathetically in his Sunday best night after night at places all over town where the babes had promised to meet him for a "date". When his room mate had access to the **900** lines blocked, the "babes on phone" would actually call him "collect" to get the business.

There have been some hardy souls in the online world that have tried the **900** number route. All have taken a big bath in short order. Tack a nickel on top of **35** cents and it comes out to **40** cents every single time - **$24** per hour with over **85%** of it going to the telephone company. None but those most bereft of their senses will pay that rate. Such pricing by the telcos is further evidence of greed beyond the bounds of common sense. The affiliation between telephone companies and the "babes on phone" sex chat lines is not in the least bit inappropriate. They wear different clothes but they're cut from the same cloth.

Tim Stryker, author of Galacticomm's Major BBS software, believes he's got a new twist on the game that might make sense. He's offering a software/hardware package for Major BBS systems called **976-BBS**.

In operation, callers dial into a Major BBS system and browse about the system in the usual fashion. If they decide they want to purchase the "credits" necessary to actually do anything useful on most Major BBS systems, they can dial a **976** or **900** number. They don't have to give any information, fill out any forms, provide any credit card numbers, or anything of the sort. By the act of dialing the number, they cause two things to happen. A flat charge shows up on their telephone bill, and the machine that answers reads off a redemption code using an automated voice device. The caller then enters the code into the BBS, and they instantly have "credits" on the system.

The actual hardware/software simply handles the problem of coordinating between the Major BBS system and the **976-BBS** system that answers the voice line. The redemption code number it reads off on the voice line is activated on the BBS - a kind of dual machine password system. The result is that the caller can, on impulse, charge **$5** or so to their telephone bill, access the BBS, and that be the end of it. No human hands need touch the process. And the operator can set the charge at whatever he likes within some limits.

The telephone company still gets the **12** cents per minute for the call to the **976**-BBS redemption center. The difference is that the call only takes about a minute, and the BBS gets the rest of the money. Further, the BBS operator is back in the driver's seat. He can make a **$5** charge equivalent to an hour's access, five hours' access, a month's access, a year's

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subscription, or for that matter sellout the whole business lock, stock, and barrel to the caller if he wants to.

There are some drawbacks. Where the telco didn't get you coming, they will going. The setup charges on a **976** line have historically been in the **$3000** to **$4000** range. The **976-BBS** package from Galacticomm is priced at **$1645**. You have to run it on a dedicated PC (**$1000**). And there are service charges each month from the telco in addition to the per minute charges - typically **$100** per month. And in some areas, the telcos themselves don't even handle it. US West won't have anything to do with **976** or **900** numbers and you will need to contact a "service company" to sign up.

The net result is a **$5000** to **$6000** investment to get in the air with **976-BBS**. That's a lot of little **$5** charges to make up - **1200** or so. But it does make the process relatively simply for the caller and because there is no labor involved in processing the orders, small charges on the order of **$5** or **$10** become plausible. According to Stryker, Galacticomm's own in-house entertainment BBS has become profitable for the first time - after quadrupling the number of people willing to pay for access after 976 became available.

And the telephone environment may be changing as well. Several long distance carriers have become terribly disenchanted with the public relations shellacking they've taken over the association with the phones of the sex goddesses. Sprint, for example, announced at one point that they were getting entirely out of the **900** number business. They've since had a change of heart, but they've also had a change of price - and they're simply not accepting sex by phone accounts. Essentially, they've dropped the setup charge from the previous **$4000** down to **$250**. Further , there are NO monthly accounting charges. For most services, they still charge a handsome **39** cents per minute. But for flat charge services such as those Stryker proposes, they take **9%** of the fee, whatever it is. When you eliminate the **$3000-$4000** setup charge, the concept takes on an entirely new luster.

For those interested in having a look, Galacticomm's **Isles of Shea** entertainment system is available at **(305)321-2410**. They run the **976-BBS** redemption package at **976-SHEA**, but you cannot access a **976** number from outside it's own area code.

We view the **976/900** concept as a long shot, but Stryker has enough new frills on this package to make it interesting to watch. It will be interesting to see whether the Major BBS sysops who buy-in find it worthwhile. If new economic models along the lines of the Sprint offering become common, it just might bring a whole new element to the BBS industry.

CHESS ONLINE

CompuServe announced in February that chess enthusiasts can now compete by modem in games sanctioned by the **U**nited **S**tates **C**hess **F**ederation (**USCF**).

Members of the new CompuServe Chess Forum can play chess via computer in accordance with the USCF's rules for postal chess. The Chess Forum offers both USCF-rated and non-rated games and tournaments. USCF-rated games give players the opportunity to improve their official USCF correspondence play rating - a numerical rating for ranking a player's chess playing ability. Members playing rated games must post their moves on an electronic bulletin board in the forum. Casual games may be played live in the forum conference area.

Players can also discuss strategy, talk to grandmasters, and get the latest news from international tournaments. Chess Forum members can also join the USCF on a special six-month introductory offer at $9.95.

"Because chess players are so geographically dispersed in this country, the greatest value of the Chess Forum lies in its ability to bring them together as an online community," said Don Maddox, USCF representative on the forum. "In the 1600s, chess players sent opponents moves by horseback and ship. At the turn of this century, they telegraphed their moves. Now we're seeing the culmination of this trend on CompuServe." CompuServe now claims 910,000 members. CompuServe Information Service, 5000 Arlington Centre Blvd., P.O. Box 20212, Columbus, OH 43220; **(800)848-8199**.

Chess is also popular on the Internet. Michael Moore has written an interactive chess server program hosted on a system in Utah. The program allows multiple players to logon, chat, play chess games, or just observe. The system maintains a ratings database calculated using the USCF method, but it is not sanctioned by the USCF.

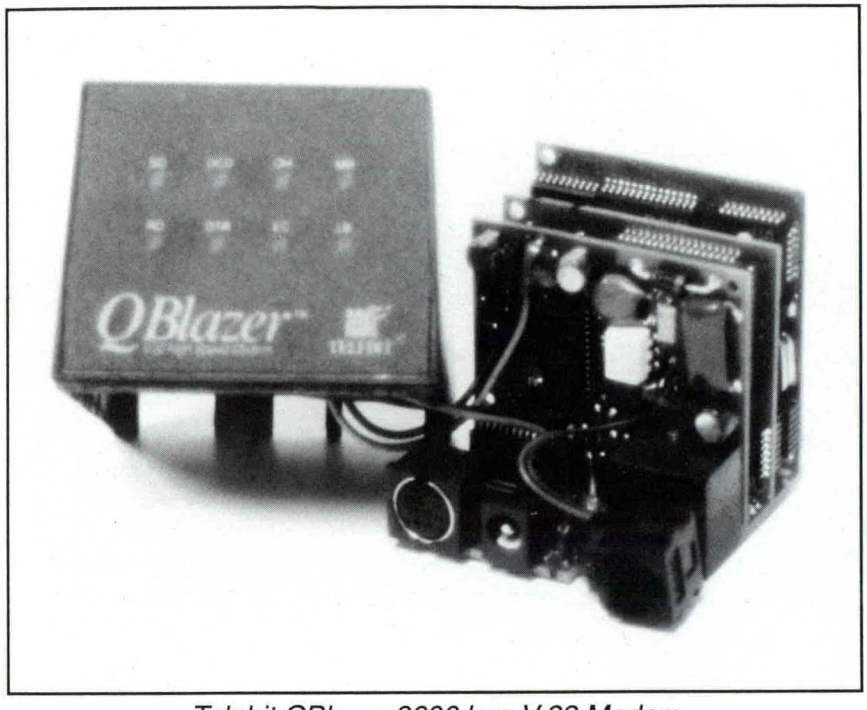
The graphics on this system are entirely based on ASCII characters and are pretty basic. You can OBSERVE a game in progress and with each player's move, the screen updates by scrolling a new display up the screen. The chessmen are represented by ASCII characters such as **B** for white Bishop and ***N** for Black Knight. It takes some getting used to, but once you become accustomed to it, it works pretty well. We logged on twice, both times in the wee hours of the morning, and found four or five games in progress and players coming and going pretty well as if it were early evening. To logon, enter **telnet lark.utah.edu 5000** give a name and guest for a password. The IP address is **128.110.128.72 5000**. For further information, contact Michael Moore at **mmoore@lark.utah.edu**.

TELEBIT'S QBLAZER MODEM - 5.2 OUNCES OF ONLINE TERROR

We played with it for a couple of weeks without success. No matter where we put the quarter, we simply could not coax the little hand to reach out and grab it. Pennies didn't work either. But that was the ONLY feature that didn't work with Telebit's new QBlazer modem.

Telebit Corporation's new Model TQB1 QBlazer modem entry is a frightfully small 9600 bps V.32 pocket modem with big modem features that sets a new mark for laptop/portable modem design.

We ran a scientific survey of everyone standing around looking lost and the vote was split. The QBlazer was misnamed by Telebit. They should have called it either **THE CUBE** or the **TELEBIT CUBIT**. It represents the



Telebit QBlazer 9600 bps V.32 Modem
- A Peek Under the Skirt

most striking departure in modem ergonomic design since acoustic cups met their end. It is a strikingly non-obvious design, but so effective, it will inevitably cause a raft of me-too modems looking as if they would be more at home hanging from a rear view mirror than attached to the end of a telephone line.

Ergonomics aside, the basic feature list is sound. A very portable pocket modem with no compromises - full 9600 bps V.32 modulation, V.42 error correction and V.42bis and MNP-5 compression, and of course the ability to fall back to lower speeds. But the refusal to accept the usual pocket modem compromises is what sets this model apart. It operates either from AC or DC (standard 9v battery) power. The AC power adapter was a surprise. Very small, and very ordinary - actually third party manufacture without even the usual ruse of relabeling. Given the vagaries of power availability to travelers, this may be a serious advantage. You're almost assured you can rig up something somehow.

Most unusually, THE CUBE features a speaker - actually a better speaker than exists in any of our desktop modems. You could carry on a conversation with this speaker - tiny though it is. It is startlingly clear in tone. This allows you to monitor the progress of connecting a call and frankly, we don't view this as a frill. If you're dialing Lithuania at $4 per minute, you ARE interested in how the connection is coming along and the best way to tell is to listen to it until you have a carrier established.

The modem also features eight LED status lights. We were told they were little LEDs. The modem is little. The LEDs are not much smaller than any other modem's, they're quite bright, and very clearly labeled. Since the MODEM is little, they take up virtually the entire front face of the case, but they are very useful.

The cube measures **2.3 X 2.4 X 2.4** inches and weighs just a tad over nothing (**5.2** oz without battery - the ***Boardwatch*** in your hand weighs over **7** ounces). The temptation to toss it repeatedly in the air is almost irresistible. When fighting the urge to do so, you might keep the **$745** list price in mind. One of the crucial innovations in achieving the size and shape of this modem is Telebit's willingness to deep-six the venerated **DB-25** connector standard for the RS-232 serial port. The serial port on the QBlazer looks quite like the power connector on U.S. Robotics modems - a round black 9-pin DIN connector.

The modem comes with a very complete package of accessories. Two cables are provided: one to connect the Macintosh DIN 8 serial port connector to the QBlazer's non-standard serial port, and another to connect the small 9-pin serial port on IBM PC-AT computers - and virtually ubiquitous on laptop computers - to the QBlazer. A 9-pin to 25-pin adapter also comes in the package.

Also included - a little travel pouch - again marvelously designed with a sturdy zipper. The back side of this package contains about a yard of velcro reminiscent of a blood pressure cuff - allowing you to virtually wrap the package around the carrying strap on your laptop with assurance that it couldn't be torn loose in a hurricane. The attention to detail is striking. A quick reference card, sized perfectly for the case, is included. The modem does come with a full sized manual that very clearly explains operation - among the best manuals we've reviewed. But for travel, you'd likely try to get by on the smaller quick reference card.

What's missing? Naturally, we'd like to see the higher 14,400 bps V.32bis modulation speed instead of the 9600 bps V.32. And given the obvious pride in pricemanship at **$745** list, a little fax capability would be both welcome and appropriate. Since the modem is designed around the AT&T Digital Signal Processor, all of that is really quite plausible since it's mostly a software function to add it. We are a little hurt that two hours is about all you'll get from a standard alkaline 9V battery. In a perfect world, batteries just shouldn't run down - laws of physics aside.

In operation, the QBlazer features Telebit's usual enthusiasm for several hundred esoteric control registers. But the manual is clearly written and it's really not hard to set up. Finally, in using a modem, there is an ethereal element for which no specification or measurement exists. We call it slop. You press a key, and an almost imperceptible delay occurs between the time you press the key and the time that act makes something happen. With all the buffering, compression, and error correction in today's modems, the slop factor has gotten pretty bad, but we thought it was the price you paid for the compression/correction. We were surprised by the solid

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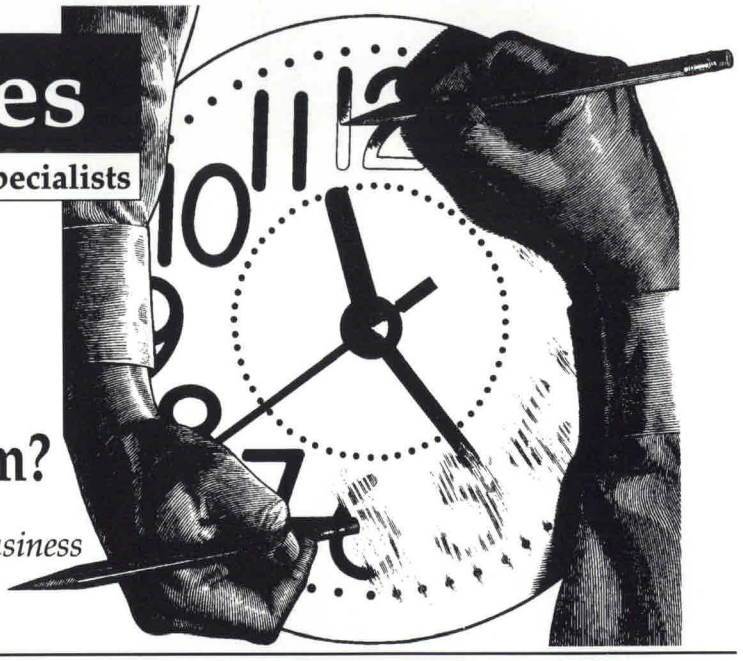

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User Manager for TDBS systems is a full membership registration and tracking system that creates a true member data base. Its capabilities include keyword search and on-line user resumes to allow users to share information about themselves, a note pad to let you keep notes on individual users, membership tracking and expiration date notification, automatic changes in user access as users join as members or memberships expire, etc. Users can join as members or renew their membership using credit cards on-line. And User Manager now has several additional modules, such as a small on-line sales module, a user reminder module and a software update module. The program is priced at $69.95.

User Manager - Software Module

An all new program that works with the User Manager to automate the updates of software to customers. You enter the user registration of software sales and any time you upload a new version of the software it will automatically present the updates to customers registered for that software package and give them the prompt to download it. This package also tracks all sales and prints reports on sale by customer or by software package, and by whatever time period you specify. Designed to reduce or eliminate the time and expense invested in updating software by mail. Please call for more information and price.

Sales Manager

The powerful and productive On-Line Sales Manager. This on-line catalog sales program is written by Jeff Johnson, another pioneer in TDBS software, and it easily shows the power and capabilities of TBBS and TDBS. The Sales Manager will display a catalog of items for sale under categories you specify, each item can have a full descriptive text file attached to it and the user can place an order at any time and continue to browse through the catalog. When done the user selects to order and is presented with each item and given the opportunity to indicate how many are to be shipped. Developed as a modular package this software will handle everything from a low level order entry system to a fully featured point-of-sale package and do all the things you would expect of a full sales package. Please come and work with it on-line. This program is priced at only $395.00.

Connex - The Connection Exchange

Connex is a professionally-based biographical, friendship, and matchmaking program designed to be used with TBBS and the TDBS option module. It allows members of your BBS to enter their own unique personal attributes, personality profile, and free-form interview. Upon completion of the user's profile and interview, Connex allows the user to make detailed selections, based on the user's own preferences. Over 350 man-hours in research and production, based on such works as Freud, Jung, and other psychological professionals, were required to create Connex and it is the most comprehensive software of its type available. Connex is complete with three databases, a biblical quote database, a gay oriented quote database or the original database. This program is priced at $139.95.

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feel and LACK of slop in QBlazer connections. When you man the keyboard with this little chunk of modem, it snaps and pops when you press the keys.

The QBlazer is clearly designed as a transportable. But Telebit's refusal to compromise on features make this modem equally usable on the desktop or on the road. The **$745** price is out of the range of almost everyone. But street prices are slightly more palatable at just under **$500** and true road warriors won't flinch in the face of the "parting with the gold" process they will have to endure to own one of these puppies. We would predict an HP-95 palmtop and a QBlazer will be THE fashion statement for the well dressed gadget man of the 1992 season. Telebit is traded on **NASDAQ** as **TBIT**. Telebit Corporation, 1315 Chesapeake Terrace, Sunnyvale, CA 94089; **800-TELEBIT** or **(408)734-4333** voice; **(408)734-3333** fax.

SHAREWARE FINDS

SHOWGIF GRAPHICS VIEWING UTILITY

Since the earliest days of the BBS, almost everyone who has touched it has grappled with the constraints of the screen in conveying information. Early systems were limited to duplicating the teletypewriter - printing alphabetical and numeric characters one after another on the screen at a blinding 110 baud. Even then, callers were creating art by arranging asterisks and alpha characters in larger patterns to make an impression.

With the advent of the IBM PC, a bit wider channel was developed. The American National Standards Institute (ANSI) X3.64 specification for terminal control defined how to use up to 255 characters to control a computer terminal. This included such control characters as necessary to clear the screen, change colors, position the cursor, cause characters to blink, underline characters, make them bold, beep, and so forth. The IBM PC more or less adopted this standard, albeit revised somewhat to handle IBM graphics characters.

Today, many BBS offer surprisingly striking ANSI graphics - to the confoundment of many new callers. Most terminal program software defaults to TTY (teletypewriter) and ANSI codes are simply printed to the screen - appearing as garbage characters - brackets, arrows, etc. This is disconcerting to new callers who assume they've done something wrong. Almost all IBM PC compatible terminal software supports a number of terminal emulations - among them ANSI (sometimes listed as ANSI-BBS). By simply picking this terminal emulation from the list of those available before calling a BBS, the picture will become clear. For the few packages that DON'T offer ANSI, VT102 emulation is pretty close, though not perfect.

But ANSI has some pretty dramatic shortcomings. It is still character based. Photographs, line art, etc. can't make the trip via ANSI.

CompuServe Information Service was among the first to try something a little more aggressive. They began offering low resolution black and white images using a format termed RLE. Lacking color capabilities, it didn't get far. Steve Wilhite, CompuServe's primary software architect, decided to develop a fully functional graphic format for storing high resolution color images himself. By February of 87 he had it working and on May 28, 1987, CompuServe introduced the Graphics Interchange Format version 87a to the world. Files conforming to the standard were identified by an extension .GIF (pronounced Jiff - as in peanut butter). GIF files caught on rather quickly.

The GIF file format has cut a wide swathe through the online world in the meantime. Larry Wood has served as sysop of CompuServe's Graphics area for a number of years. From the early scanned images, the field has grown to include thousands of scanned photographs, art, and line drawings. The Smithsonian Institution, for example, stores over 20 million images physically. In recent years, they've actually begun scanning many of these into GIF format. The Smithsonian's Photo Services Group, located in the basement of the Museum of Natural History, are currently scanning hundreds of fascinating photographs into GIF format and uploading them to CompuServe. Images of the Desert Storm Parade were actually in the CIS GRAPHICS area before the parade was finished.

This GRAPHICS area also sports some world class art from the tiny subset of the world that is both artistic, and computer literate. Some of the images are just breathtaking.

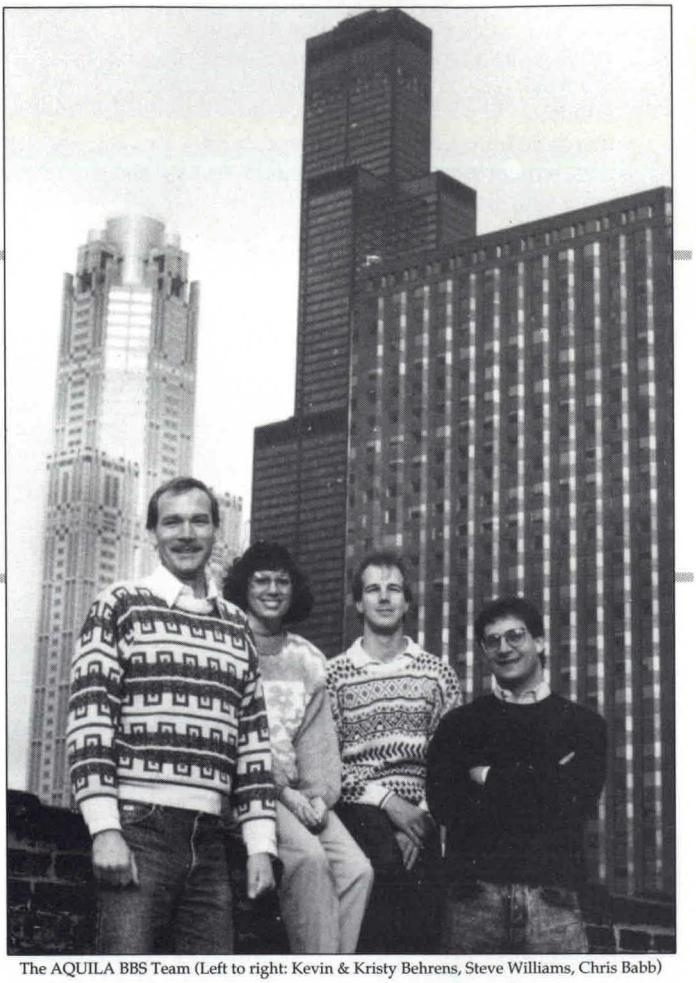
In the BBS world, GIF images have taken on gargantuan proportions. Images from outer space, automobiles, and military hardware predominate. But cartoon characters, stills from movies, and a stunning array of nature stills are popular as well.

Perhaps the biggest drive online is pornography. A number of systems thrive on it. Event Horizons in Lake Oswego Oregon, for example, runs 64 lines on a single PC using TBBS software. The system is not only almost solely devoted to pornographic GIF images, but probably comprises the most profitable BBS in the world at this point. Operator Jim Maxey now has a staff of some 20 people and the system generates roughly $8000 each and every day of the year from callers desperate to get the latest images of human anatomy and sexual deviancy by computer. There is something about the male dominated world of the modem that hungers for full color high resolution images of fat chicks with donkeys, women with grotesquely enlarged hooters, and in general humanoids in a striking variety of poses of indiscretion. Some are erotic, while others are clearly obscene by anyone's standards. The legal status of much of this activity is seriously questionable, but so far has not emerged yet as the issue of the day. Without a modem, it is not readily apparent.

Eventually, we hope the format matures beyond this. Thousands of JPL space photographs taken by Voyager II of Jupiter, Neptune, Saturn, and Uranus have been converted to GIF format and are commonly available online. Similar views of Venus taken by the Venus Radar Mapper (Magellan) are also available. Satellite photographs of earth are showing up. The GIF format has become enough of a standard that you can find a viewer program on any BBS and display these images on your PC. As the artistic world becomes more com-

AQUILA BBS

Chicagoland's Largest System



The AQUILA BBS Team (Left to right: Kevin & Kristy Behrens, Steve Williams, Chris Babb)

Since 1988

Aquila has filled the computer screens of Chicagoland for over three years, growing from a single modem line system in 1988 to over 25 lines in 1992. Aquila's success over the years is due to the enthusiastic support of our users. New callers are encouraged to download our current file list and electronic mail conference listing. A short guided tour highlighting our system services is also available for new users. All of our information is automatically mailed to you to read in the comfort of your home or office. So pick up your modem and give us a call! You will find Aquila BBS to be the most valuable bulletin board in your dialer.

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Give your modem a workout! We add new shareware and public domain programs everyday. Over 400 programs are added weekly. With more than 5 Gigabytes of on-line storage, we stock over 50 thousand programs. Aquila makes it easy to find the programs that are important to you, by organizing them into 120+ file directory categories everyday.

We cater to the Windows User

With Windows becoming the most popular user interface around, we make an extra effort to keep you supplied with the latest programs and enhancements by devoting a special conference area just for Windows containing 2000+ files organized into 40+ file directory categories.

Our organization and the latest programs make our file areas the most popular around. These are just a few of our most popular categories available:

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- System Enhancements
- File Organizers
- Word Processing
- Computer Games
- Music and Midi Sound Files
- Computer Animations
- CAD Drawing Utilities
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- Database
- Programming
- Icons - Icon Managers
- Wallpaper - BMP's
- Multi-Media Related
- Fonts - Font Utilities

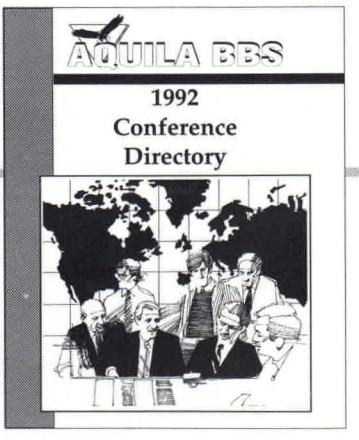
New User Information

All first time callers receive by mail, our printed 'New User Information' and 'E-Mail Conference Directory' guide, as well as a 'Quick Command Guide' to help you get the most out of Aquila. The new user information covers system services such as answers to commonly asked questions, USAToday, Boardwatch Magazine, and Electronic Mail off-line readers. The 'Quick Command Guide' is a desktop lookup for using Aquila commands.

Aquila Starter Kit

Callers that are new to modem communications will find 'The Aquila Starter Kit' a great time-saver. Easy for the beginner and helpful for the expert! This $39.95 kit includes the following:

- Procomm (communications program)
- Full documentation for all BBS commands
- Off-line file browsing program
- Our complete file listing on floppy disk
- Off-Line E-Mail Reader
- Three month basic membership



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- General Discussion
- Computer Related
- Vendor Support
- Programming Languages
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puter literate, we would expect some dramatic new art forms to take shape online. It is a bit unfortunate that the driver behind this emerging standard is the prurient and plebeian demand for pornographic photos of babes au natural - unencumbered by the efforts of the textile industry, but it appears to be so.

To view GIF images on a computer ideally requires a color VGA or SuperVGA video card and monitor. These have become almost standard on PCs sold in the last couple of years. A utility program to display the files is also necessary with Bob Montgomery's VPIC standing out as probably the favorite of most GIF aficionados. Finally, the pictures tend to be rather largish files - on the order of 250 KB in size with some as large as 700 KB. Higher speed 9600 bps and faster modems make this more tolerable and much of the drive toward the higher speed modems in the BBS community has come from the demand for GIF downloads.

In the past, most callers dialed up CIS or their favorite BBS and downloaded the GIF files they thought they might like. Once the download was completed, they then viewed them offline using a GIF viewer utility program. This is slightly cumbersome. CIS offered a less than ideal solution with their CompuServe Information Manager - a software program to make using CompuServe much easier. The program would allow you to select a GIF image and have it displayed on the screen. To display a GIF on screen, you obviously must download the data. But CIM simply wrote it onto the screen and didn't save it to disk. If you LIKED the image, you could then download it normally. This seemed designed to maximize connect time - not function. The latest version of CIM is supposed to correct this.

Bob Parquet has developed a shareware utility we just love titled **SHOWGIF**. His fourth release of this program is version **5.5** and if he didn't have it right before, he does now with this superb utility.

SHOWGIF performs two basic functions. One, it allows you to view GIF images offline much like other GIF utilities. It does a reasonably competent job of this. But much more exciting, SHOWGIF also acts almost like a GIF terminal emulation, not that there is such a thing. The program can be installed in "resident" mode. This actually takes advantage of a DOS function referred to as **T**erminate and **S**tay **R**esident, or **TSR**, whereby a program can be loaded and remain in the background while you run other programs.

The magic comes in when you dial a BBS and download a GIF file. SHOWGIF actually monitors all data of any type written to disk. If it detects that either the software is writing a file with the extension **.GIF**, or if it detects the keywords **GIF87a** or **GIF89a** (part of the GIF format header), it intercepts the data and displays it on screen.

The result? Each time you download a GIF file, it is painted on the screen AS IT DOWNLOADS. You watch the picture take shape during the download process. After the download is completed, the image stays on the screen until you press a key. As soon as you do, your normal terminal program screen comes back up.

The net effect is that you can VIEW GIF images online. And a copy of each one you view is also on your disk drive. This changes the entire dynamic of viewing and downloading GIF images.

The program is artfully elegant from front to back. Because of the variety of EGA, VGA, and SuperVGA cards available, it should be a nightmare to configure this program. Paquet has developed an auto detect function in SHOWGIF that tests your video card to determine what kind it is, and configures itself automatically. While you can still do this manually, we were impressed by how capable this function was.

Most TSR programs allow you to load them and print a few characters on screen to note that you did in fact do the deed and what key activates the program. The attention to detail in SHOWGIF extends even to these mundane functions. When you load the program with the **SHOWGIF /R** option, a delightfully artful image with the **SHOWGIF** logo on it slides down slowly from the top of the screen, bounces five times at mid screen as if it were a balloon "settling", and then "falls" out the bottom of the screen slowly and gracefully. You now have it installed in resident mode. In operation, it requires a frugal **32KB** of memory.

SHOWGIF is also quite reasonably priced with a **$15** registration fee (**$30** for diskette and printed manual) and absolutely fully functional in the best shareware tradition. A support BBS titled **GIF Cache** at **(419)531-2693** even has PostScript formatted documentation files available for download. All in all, SHOWGIF is one of the most useful, technically elegant, thoroughly easy to use, and yes, beautiful shareware programs we've ever reviewed. It's available in the file **SHGIF55.EXE** and is worth the download just to see the install screen - if you never download a GIF in your life. Bill Parquet, 30231 Bates Road, Perrysburg, OH 43551. Support also available from **Henrietta Outhouse BBS** at **(216)965-5463**.

LEGALLY ONLINE

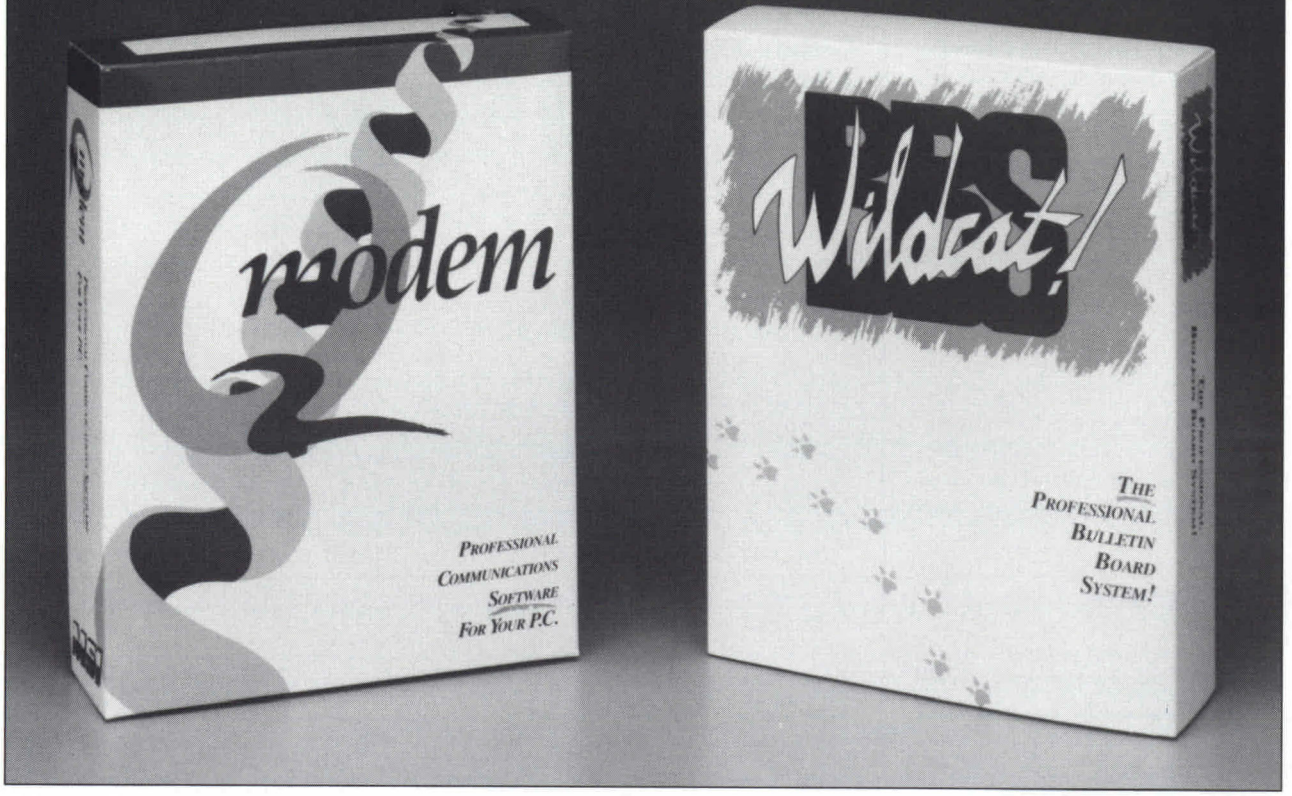
CD-ROMS FOR BULLETIN BOARDS - LEGAL IMPLICATIONS

by Lance Rose

CD-ROM drive prices must have just dropped below some magic price point, because lots of people with BBSs are suddenly talking about them. It seems a mad rush is on to make CD-ROMs available on-line to BBS callers.

The attraction of putting CD-ROMs on-line is not hard to fathom. They store a vast wealth of information, entire encyclopedias and reference books on slim silvery disks. Those who only occasionally need the information on a CD-ROM need not buy it if they can merely dial up their local BBS and do a quick search. The usefulness of a CD-ROM can be multiplied many-fold by centralizing it on a BBS and making it available to many callers. Many regard CD-ROMs as a new kind of ready-made information service for BBSs, attracting more callers and adding perceived value to the BBS.

SOFTWARE TO MAKE YOUR MODEM JUMP THROUGH HOOPS.



Qmodem has been doing just that for the last eight years as the communications software of choice for well over a quarter of a million pioneering communication enthusiasts worldwide. It was one of the industry's best kept secrets and now MSI makes it available in a full commercial package, the first to include an off-line mail reader. File transfers scream at baud rates up to 115,200 using the latest in error-correcting protocols include Xmodem, Ymodem and Zmodem. Add a script language, 8 of the most popular terminal emulations, a dial-in host mode, context-sensitive help, and the easiest installation in the industry and you've got the best bargain in a general communication program available today.

Wildcat! is the system of choice when it come to implementing a Bulletin Board System. Both single and multi-line versions are available supporting up to 250 incoming phone lines or LAN workstation connections with bullet-proof security. The message system includes private mail, forwarding, carbon copies, and return receipts with provisions for echomail connections and Netware MHS support. File transfers make use of any protocols desired including Xmodem, Ymodem, Zmodem, Kermit, and many more at speeds from 300 to 57,600 baud. The branching questionnaire allows formatted answers for order-taking or polling callers. WILDCAT! supports multi-tasking operation under DESQview as well as specific support for Netware operation.

MSI products available from Software etc. stores, nationwide or a major software dealer nearest you. For more information please contact : Mustang Software, Inc. P.O. Box 2264 Bakersfield, CA 93303 Voice: (805) 395-0223 • Fax: (805) 395-0713 BBS: (805) 395-0650

MSI
MUSTANG SOFTWARE INC.

LAN TIMES RATING		
Wildcat!		**9.0**
Criterion	**Weighting**	**Score**
Features	150	Excellent
Security	100	Excellent
Interoperability	100	Good
Performance	150	Excellent
Manageability	100	Excellent
Installation and Use	100	Excellent
Documentation and Support	100	Good
Error Handling	100	Good
Overall Score		**Excellent**

One nagging little question: Do BBSs have the right to make CD-ROMs available to their callers? CD-ROMs are covered by the copyright laws and license agreements, just like computer software. This is not an academic question, either. Many CD-ROMs are marketed by large companies with lots of legal firepower. If BBSs cut off too many potential unit sales with easy access to the info inside the disk, these companies could move quickly to stop the bleeding. To such companies, unauthorized distribution of CD-ROM materials through BBSs looks no different from pirate BBSs that distribute unauthorized software copies (and which, as we know, have been shut down for doing so).

As usual, there is no single, simple answer. The right to distribute CD-ROM materials through a BBS depends on the kind of information involved, the contract terms, and the relationship between the CD-ROM manufacturer and customer.

CD-ROM Contracts

The first thing to look at in any legal analysis of business relationships are any contracts that might be involved. CD-ROMs are almost always sold under a contract, either signed or of the "shrinkwrap", unsigned variety.

CD-ROM contracts usually have something to say about whether the customer can distribute the materials on the CD-ROM to others. Here is some language from the Dialog Ondisc license agreement (CD- ROMs are referred to as the "Products"):

"Customer may use the Products only for internal purposes and shall not use the Products as a component of or as a basis for a database prepared for commercial sale, access or distribution outside of Customer's organization . . .

Products may be used only on a single computer at any time . . .

Products may not be used in a service or software rental bureau, timesharing, interactive cable television, multiple computer processing unit or multiple site arrangement . . .

The AmCoEx Index of Used Computer Prices

The following prices are for mid-February 1992.

Machine	Bid	Ask	Close	Chng
IBM XT 089	200	450	325	+50
IBM AT 339	350	700	650	+25
IBM PS/2 Model 30/286 20M	500	950	725	..
IBM PS/2 Model 50 20M	700	1050	950	+50
IBM PS/2 Model 70 60M	1600	2200	1850	..
Clone XT 20 Mg	200	400	300	..
Clone AT 20 Mg	400	700	625	+25
Clone Notebook 386SX, 40 MB	1050	1900	1500	-100
Clone 386/SX 40M, VGA	800	1350	1000	+100
Clone 386/25 40M, VGA	800	1400	1150	+100
Clone 386/33 40M, VGA	1100	1550	1375	+200
Clone 486/25 80M, VGA	1400	1950	1700	..
Compaq SLT/286 20M	700	1200	950	..
Compaq LTE 286 40M	700	1000	925	+25
Compaq Portable II 20M	400	700	600	-50
Compaq Portable III 40M	700	1150	875	..
Compaq Deskpro 286 40M	500	800	675	+75
Compaq Deskpro 386/20e 100M	1800	2500	1650	-300
Macintosh Plus	300	600	650	+75
Macintosh SE 20M	700	900	850	-150
Macintosh SE/30 40M	1300	1900	1800	-100
Macintosh II 40M	1400	2150	1900	-300
Macintosh IIcx 80M	2300	3100	2700	-325
LaserWriter Plus	900	1500	1275	-25
LaserWriter IINT	1500	2150	1850	-50
Toshiba 1200HB	800	1150	1000	..
Toshiba 1600	1100	1500	1200	-100
Toshiba T-3100SX	1700	2300	1875	-25

No telecommunications transfer of any portion of the Products may be made . . ."

That covers the waterfront. I cannot imagine any loophole for BBSs not plugged by that contract language. You don't have to be a genius, or even a lawyer, to see that Dialog does not want its CD-ROMs up on networked computer systems or BBSs.

Are all CD-ROM contracts so prohibitive? Here's some language from a couple of other CD-ROM makers. First, Dun & Bradstreet's contract for "Duns Reference Plus" CD-ROMs:

"Subscriber . . . agrees that it will not upload the records contained on the Duns Reference Plus CD-ROM disc into any electronic storage device."

This provision, short and sweet, would not absolutely prohibit online searches of D&B's disk on BBSs by outside callers. But the restriction against electronic storage turns out to be severely limiting. It would prohibit storage of records from the CD-ROM not only on the BBSs hard disks, but those of its callers as well. And it would be next to impossible for BBSs to prevent their callers from storing records of CD-ROM searches on their own hard disks.

FREEDOM without THE PRESS

You operate the very best electronic bulletin board system you possibly can. And you try to provide your callers with the best entertainment, news, software, and technical information you can find. We're here to help with online information products you can use for your callers benefit. And that means increased paid subscriptions to your system.

USA TODAY Decisionline

Published by Gannett New Media each business day, USA TODAY Decisionline provides a remarkably concise, readable, online morning summary of the events of the day for your callers. Averaging 60 KB each morning in .ZIP,.ARJ,.ARC, or .LZH archived format, USA Today Decisionlines provides news on eighteen topical categories.

You can place the news gleaned from Gannett publication's jounalists at the keyboard of your callers each AM. Available by 5:00 AM Mountain Time each Business day, USATODAY can be downloaded from our multiline information service or file requested from our multiline mail system using your U.S. Robotics HST 9600 bps or V.32 modem at 9600 bps or higher - normally less than a one minute connection. And maintenance of this product is so simple to automate, you don't even need to get out of bed. Best of all, USA TODAY needs no introduction or explanation. It has the name recognition to instantly draw new callers to your system. Put THE most popular daily national newspaper in the world on your electronic bulletin board for as little as $25 per month.

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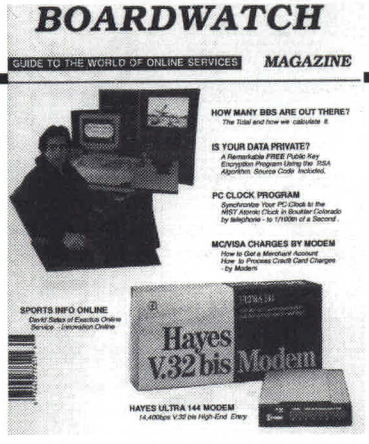
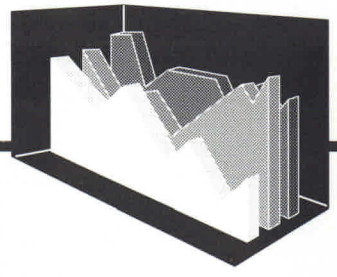


BOARDWATCH Online Edition

While the online information services industry is broadening daily, the number one topic of interest to most callers is still how to put their modem into play for maximum benefit. And since March 1987, Boardwatch Magazine has been the best way to do it. Now, we've introduced an Online Edition specifically for display on your information service. Boardwatch lists product support systems, free government database services, and selected bulletin boards of note from all over the world. Boardwatch places the same information you now hold in your hands - the best information the online world has to offer each month - up on your caller's screen. Get the definitive publication for the online world for your system. Boardwatch is available at a quarterly rate of $75 or an annual rate of $250.



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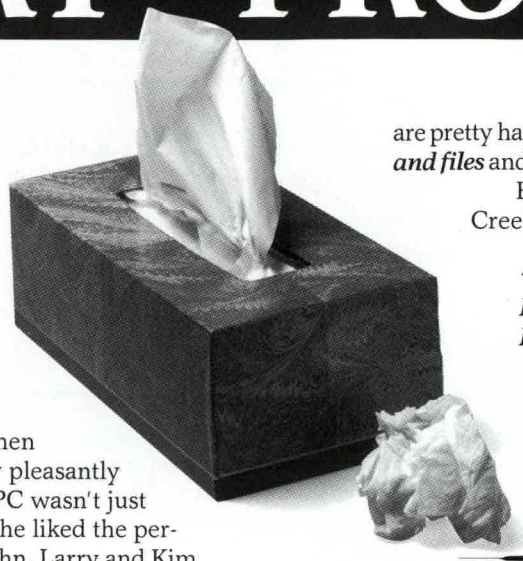

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The American Psychological Association markets a CD-ROM called PsycLIT on SilverPlatter (it takes a Freudian to determine where the puns begin and end with that name), containing a database of professional information and literature. The language of the accompanying license leaves little room for interpretation:

"The Database and Disc . . . are provided only for the Customer's internal use . . . and may not be made available for internal or external distribution or to simultaneous multiple users through timesharing, networking, downloading, loan or other similar or dissimilar arrangements. Neither the Database nor the user manual (and/or other documentation), or any part thereof, may be reproduced or republished in either print or machine-readable form, for a fee or otherwise, for distribution outside the Customer's organization."

Again, any conceivable use of the CD-ROMs on BBSs is blocked off.

The examples above were all for products that you have to sign a contract to receive. What about the growing market for mass-market CD-ROMs, with shrinkwrap licenses? Are they any more liberal?

BDI has a currently popular mass market CD-ROM called "U.S. History on CD-ROM." Its regulates use of the CD-ROM information is as follows:

"(a) Dedicated Use. BDI grants you the right to use one copy of the BDI CD-ROM disc as "US History on CD-ROM" (the "SOFTWARE") on a single computer ("Dedicated Computer"). You may transfer the SOFTWARE to another single computer PROVIDED you do so no more often than once every thirty (30) days and no copies of the SOFTWARE licensed herein are retained for use on any other computer.

(b) Transitory Use. Notwithstanding (a), you may transfer the right to use the SOFTWARE as often as you like if you require each user of the SOFTWARE to have physical possession of an original BDI SOFTWARE license (either this BDI License Agreement or an equivalent designated by BDI) at all times during the use of the SOFTWARE. For the purposes of this section, "use" means loading the SOFTWARE into RAM, as well as installing, printing or copying files from the CD-ROM to any storage, display or printing device."

It's hard to say what BDI's lawyers had in mind when they concocted this weird scheme for controlling CD-ROM use. The effect is pretty clear, though. No one can have access to BDI's CD-ROM except on the single "Dedicated Computer", unless they have an authorized license agreement - and it looks like you have to ask BDI itself for one of those. Unless sysops can receive bushels of such agreements from BDI simply for the asking, to distribute to their callers, the net effect of this scheme is to prohibit use or copying of the BDI CD-ROM except on the single licensed computer.

TOP FOUR EXCUSES FOR NOT OPERATING A MULTILINE BBS

1. I would have to switch to Unix.
2. I'd have to get a 386 and separate multitasking software.
3. I can't afford to buy a PC for every line and connect them on a LAN.
4. The software is just too darn expensive.

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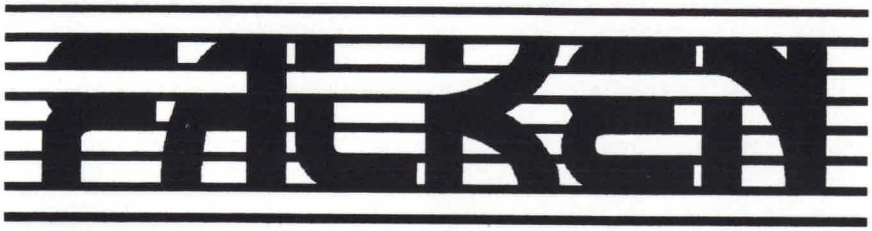
2. **Falken 6 contains its own multitasker. Because we streamlined it for serial I/O, our multitasker does not degrade file transfers speeds for multiple callers, unlike general-purpose multitaskers. While systems running multiple doors require expanded memory, Falken's standard features operate in 640K.**
3. **With Falken 6, you only need one PC. Because it polls lines by port address and does not use IRQs, you can add multiport serial cards and internal modems without the hardware constraints imposed by IRQs.**
4. **At $99 for the 2-line version, Falken 6 is quite affordable. Our 32-line version costs only $499 and we also offer 4 and 8-line versions.**



FALKEN 6 Price List

2-Line.....$99	**16-Line.....$399**
4-Line.....$199	**32-Line.....$499**
8-Line.....$299	

Test Drive FALKEN

The 2-line version of ***Falken 6*** is available as Shareware. To download ***Falken*** or to see the system in action, **call our BBS at 703-803-8000** (USR/HST), local access on PCPusuit node DCWAS or Tymnet node 0476.

You can also use the coupon below to request more information or order Falken 6 .

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- Supports **up to 16 lines** plus a local login channel.
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- **Built-in multitasking environment** breaks the 640K barrier. ***Falken*** uses expanded memory so that it will even operate on XT-class PCs.
- **Doors** which allow external applications to be developed.
- **Link teleconferences** with other ***Falken*** systems to create SUPER teleconferences.
- **Sysops can dial-out** while ***Falken*** is on-line supporting other users.
- **Fully configurable menus** to create the desired 'look-and-feel' of the system.
- **Customize your menus** and screens for both ANSI and ASCII users.
- **DOS Shell,** written specifically to be used with FOSSIL drivers, can be used either locally or remotely. It can be used to copy, delete, rename, type, dump, list, or locate files.
- **Utilities included** to automate maintenance, billing, monitoring and other functions.
- **E-Mail** with distribution lists.
- **Attach File to E-Mail** to be downloaded when the letter is read by the recipient.
- **Message Base** uses threaded responses.
- **Full Screen Editor** uses ANSI codes to manipulate text on the screen.
- **Global Commands** include: .who, .user, .userlist, .time, .logoff, .send, .kill, .extend (allows a sysop to give a user 10 extra minutes on their session).
- **The Ymodem, Zmodem, and Xmodem protocols** use the FOSSIL interface to the I/O ports. Source code for all protocols is available.

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Lastly, here's language from a contract for a CD of shareware created by a sysop for other sysops:

"You may use the [CD] on compatible computer [sic] including networks. You may use the [CD] on public or private Bulletin Board Systems. . . You may use all of the programs provided on the CD in accordance with the terms of the Authors of the programs in question.

. . . You may not use the [CD] on a public or private Bulletin Board System (BBS) in the Buffalo NY local phone calling area."

Finally, a contract that says it's okay to use the CD-ROM on a BBS! We must note, though, that it's a CD-ROM full of shareware, which is traditionally distributed through BBSs. Also, this is a very small company. Its liberalism in permitting BBS use may not apply to the bigger companies issuing the agreements we looked at above.

So far, going by the language of the typical contracts used with CD-ROMs, BBSs rights to make them available to callers look very limited. But are those contracts binding?

It depends on the contract. Whenever you sign a contract, you are definitely bound by its terms (except where they are overridden by important legal or public policies). The Dialog, D&B and PsycLIT contracts above all require the customer's signature. This means the customer agrees to all their terms, including the restrictions against electronic redistribution, such as on BBSs. Anyone who signs one of these contracts to obtain a CD-ROM is, by that same act, agreeing they will not make the CD-ROM available to others for electronic access and/or download.

Other contracts, particularly for mass market products like the BDI U.S. history CD-ROM, do not require the customer's signature. They are so-called "shrinkwrap" licenses, which the customer supposedly agrees to just by opening the box and using the product. Typically, shrinkwrap licenses state at the outset that if the customer does not agree to all the fine print, he should immediately give the product back to the seller for a refund. If he does not return the product and uses it, it is supposed to count as agreement with the contract terms.

There is a growing (though not complete) consensus among legal authorities that shrinkwrap license terms, used on software as well as CD-ROMs, are barely enforceable if at all. It stretches the imagination too far to say when you buy a consumer product you also agree to a bunch of contract terms, just because you don't run back and return it to the store. There are few cases on the subject, but each court considering the matter so far has held the shrinkwrap license before it unenforceable.

This means that for mass market shrinkwrap-licensed CD-ROMs, the contract terms are not too important. The next step in determining the rights to use these products on BBSs is to take a look at copyright law.

Copyrights in CD-ROMs

CD-ROMs can hold all kinds of copyrightable materials - text, images, sounds, databases, software and more. These works have copyright protection on CD-ROM, just as they would if contained in a book, record, videotape or floppy disk.

The owners of the materials on CD-ROMs are given certain exclusive rights under copyright law, including the rights to make copies of the materials and distribute them to others. We readily understand what this means for books, records and software. The original copies of a book printed under the copyright owner's authority can be sold and resold, but no one can print or distribute new copies of the book without the owner's permission.

CD-ROM copyrights work the same way. You can buy a CD-ROM and sell it to your friend without violating anyone's rights. But you can't manufacture or distribute new CD-ROMs that are copies of the CD-ROM you bought. That would violate the copyright owner's rights, exactly in the same way as pirated or bootleg records, tapes and videotapes violate copyrights.

There are other ways to violate a CD-ROM copyright besides making an exact CD-ROM copy - any copying or distribution of the materials contained in the CD-ROM without the owner's permission will be a copyright violation. Thus, if a caller retrieves copyrighted information from a CD-ROM on a BBS into his own computer, that would be an infringing distribution if the copyright owner did not give permission. If a caller downloads copyrighted CD-ROM information on to his own hard disk, that would be making an infringing copy if there is no permission from the owner.

Sysops might think that's no big problem. The callers are doing the downloading, so they're the infringers, and the sysop is at no risk. However, the copyright law is well-equipped to deal with this loophole through the concept of "contributory infringement." If someone assists others to commit copyright-infringing activities, then he can also be liable for infringement even if he does not make or distribute a single infringing copy. Therefore, even though every infringing access and download to a CD-ROM might be initiated by a caller, the sysop could be liable for putting the CD-ROM in the position to be used that way, planning for the infringing activities to take place.

On our first pass through the copyright law, we see roughly the same limits we saw in the license agreements. When you buy a CD-ROM, you can use it on your own computer system, but you cannot make it available to other systems without the copyright owner's permission. Such permissions do exist, as in the shareware CD- ROM license we looked at above.

Does that mean the game is over - barely anything from a CD- ROM can be placed on BBSs without special permission? Not quite. The copyright laws are limited in certain ways that enable sysops to place CD-ROMS (or certain parts or aspects of them) online without any need for the copyright owners' permission. The ability to do so, however, requires taking a close look at the kind of information on the CD-ROM in question.

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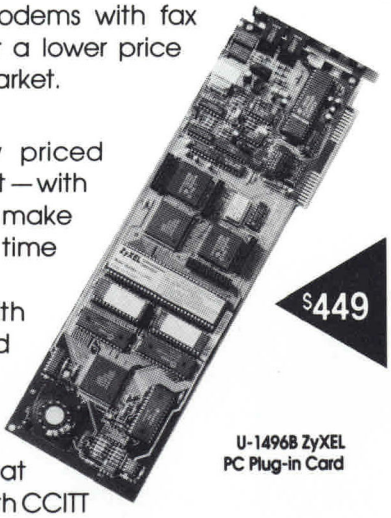

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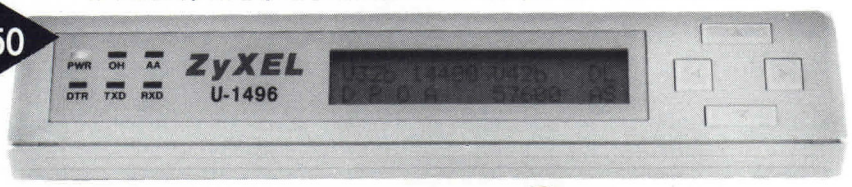

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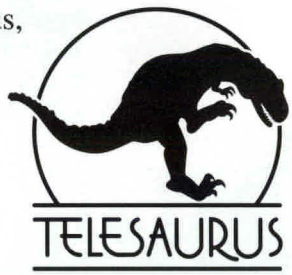

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The main limit on CD-ROM copyright protection (and major BBS opportunity) is simply that much of the information found on many CD-ROMs is not copyrighted. For example, a CD-ROM containing all the works of Shakespeare will not have a copyright on Shakespeare's writings - any conceivable copyright on them expired long ago. If the company distributing the CD-ROM adds its own commentary, however, this is probably protected by copyright. In this case, if the sysop can find a way to make the uncopyrighted Shakespeare works available from the CD-ROM without making available any copyrighted materials added by others, there will be no copyright infringement.

Another unprotected area is factual information. As we discussed in this column a few months ago, the Supreme Court recently invalidated the copyright in a white pages telephone directory. The Court denied any copyright in the factual name, address and number information, and further said that the directory's arrangement of that information was too unoriginal to deserve a copyright.

Many CD-ROMs contain directories of various kinds. To the extent they are mere compilations of factual information, those facts have no copyright protection, and can be copied and distributed with impunity. Even the signed license agreements discussed above cannot limit our rights to use factual information. The freedom to use factual information under copyright laws overrides any attempt to limit that freedom by contract (though you'll never hear any of the CD-ROM sellers admit this). Bibliographic information, historical facts, business facts and statistics - all these are fair game, and cannot be protected from copying by copyright law.

Most directories of purely factual information do retain vestiges of copyright protection for the "selection, coordination or arrangement" of the facts by the person or business who compiles them. The Supreme Court calls this a "thin copyright". If the arrangement of the facts is original in the least (ie., more original than the arrangement of the white pages), then the compiler has copyright protection against anyone who would copy not only the facts he compiled, but the exact manner in which they are arranged and presented.

For BBSs, unfortunately, this means you cannot simply give callers access to the CD-ROM and searching software through a door. This is certainly the most sensible and easiest way to work with the factual information on the CD-ROM, but it also would infringe any copyright interest at all, however thin, held in the CD-ROM by the compiler. To legally gain and distribute access to the facts on a CD-ROM, the sysop must extract those facts out of the exact presentation used in the CD-ROM. This is relatively easy if the factual information happens to be exportable in a standard format such as DBF or ASCII. If the CD-ROM search software only lets you get text displays to screen and printouts, extracting the factual information could be a lot of work.

Sysops are also free to copy the ideas contained in copyrighted CD-ROM materials, and express them in their own way. This is because copyright does not prevent others from copying "ideas", but only the copyright owner's expres-

sion of those ideas. Since the main value of CD-ROMs consists of their holding massive amounts of information, the right to extract "ideas" from CD-ROM materials does not create much opportunity for sysops, except perhaps for individual articles or items contained in a CD-ROM. By the time you rephrased all the ideas on even one CD, you could have made enough money at an honest job to pay for BBS rights to hundreds of them.

The legal doctrine of "fair use" is often bandied about in discussing online copyrights. "Fair use" is a legal excuse for copyright infringement; conduct that would normally be considered infringing is considered okay if it's fair use. This excuse is probably available for online use of CD-ROMs, but the conditions for its application have not been sketched out yet in the courts. Those who wish to make CD-ROMs available for regular, random access use by callers should not hold their breath waiting for some legal authority to tell them it's okay under the fair use provisions.

For one thing, any BBS making significant money from CD-ROM access as a value-added feature will probably not qualify for fair use treatment - profit-making activities rarely do, except in such narrowly defined situations as using small snippets of copyrighted materials as part of a book or movie review. Even non-profit BBSs could have a hard time qualifying for fair use. If they provide access to a CD-ROM for a significant number of people or businesses who might otherwise buy the CD-ROM for themselves, they are probably costing the CD-ROM owner some profits. That kind of effect on the copyright owner's market is usually enough to invalidate a fair use claim.

So what are the BBS owner's rights to use CD-ROMs on BBS? To sum up:

- If the CD-ROM license agreement permits you to use the CD- ROM on a BBS or other network situation resembling your own, there's no problem. Sometimes the basic license does not grant this right, but you can purchase it by contacting the CD-ROM manufacturer.

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- If you signed the CD-ROM license agreement, then the restrictions will apply to you as written, except you are not restricted as to any information which the CD-ROM company does not own under copyright law (or, in the case of confidential information, trade secrets law).

- If you did not sign a license agreement, then under copyright law you cannot make additional copies of the CD-ROM in whole or part. Nor can you distribute parts of the CD-ROM to callers, except for information which the CD-ROM company does not own under copyright law.

- CD-ROM publishers do not own any information that they took from the public domain and placed in their CD-ROMs, nor do they own any factual information or ideas. Sysops are free to make any such information available, provided they can rest it from any copyrighted setting the CD-ROM owner may have placed it in.

I expect a number of readers will disagree with the entire discussion above. I have already come up against such disagreement in personal discussions. The objections are not based on copyright law, but on two other grounds. First, some believe that copyright law is hopelessly losing out to future shock, and that CD's are one of the first new media that just escapes any kind of copyright analysis. This argument strikes me as nonsense. CD-ROMs are little different from books, records or software for copyright purposes.

Second, some feel that the public interest in inexpensive access to the information available on CD-ROMs mandates that they should be made cheaply available to the public in places like BBSs. This populist rhetoric sounds nice, but it is misplaced. The exact same argument could be leveled at all media covered by copyrights (records, books, etc.), not just CD-ROMs. But it has been long settled in the courts of this country that temporary monopolization of expressive works is an acceptable trade-off for the incentive that copyright protection creates for the production of those valuable works. In other words, even though cheap bootleg tapes can place entertaining and soporific music more cheaply into the ears of the masses,

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it is necessary to prohibit them in order to sustain the promise of exclusive control over profits believed necessary to encourage music-makers to keep making desirable music.

Nothing about CD-ROMs changes the equation. If CD-ROM producers feel inadequately protected in distributing their products, such as under a rule that CD-ROMs can freely be distributed through BBSs, they simply won't produce them in the first place. Courts faced with this argument are unlikely to carve out a big exception permitting BBSs free distribution of CD-ROM materials.

As a last consideration, I question the premise of this entire discussion - that CD-ROMs are some kind of new gold mine for BBSs. Face it - if you can get your hands on a totally excellent CD-ROM, so can every other guy with a BBS. BBSs generally will not be able to differentiate their offerings from other BBSs through offering mass-market CD-ROMs to their callers, any more than fast food chains differentiate their restaurants simply by offering hamburgers and french fries. The future of BBS information services more likely lies in the unique information and specialized databases that sysops, and perhaps other people and businesses they hook up with, can offer to their callers. So perhaps the severe limitations on CD-ROM access rights is a blessing in disguise for BBSs. They may help discourage sysops from putting too much effort into this lazy man's approach to providing information services, and encourage them to get on with more exciting and useful information projects.

[***Lance Rose is an attorney practicing high-tech, computer and intellectual property law in the New York City area, and is available on the Internet at elrose@well.sf.ca.us and on CompuServe at 72230,2044. He works with shareware publishers, software authors, system operators, technology buyers, interactive media developers, on-line database services and others in the high technology area. He is currently revising the book SYSLAW, a legal guide for bulletin board system operators, due to be published early 1992. - Editor***]

INTERNET NEWS

NREN - A GROWING CONTROVERSY AND CONGRESSIONAL HEARINGS

Beginning March 12, 1992, a Congressional subcommittee will open hearings on how the National Science Foundation has allocated control over the NSFNet, the backbone of the American Internet. The hearings are the result of complaints by commercial vendors who are accusing NSF of giving preferential treatment to Advanced Network & Services of Elmsford New York (ANS).

On September 17, 1990, NSF, the Michigan Education and Research Infrastructure Triad (MERIT), IBM Corporation, and MCI Telecommunications announced the formation of a non-profit 501 (c)(3) corporation called Advanced Network & Services. Former IBM Vice

President Al Weis was named President and CEO and the entity was funded by $10 million from its corporate sponsors. MERIT was the caretaker of a cooperative agreement to operate the T-1 NSFNet backbone and they in turn contracted with ANS for operation of the T-1 backbone and the upgrade to a 45 Mbps T-3 based backbone. This contract expires in November, 1992. Effectively, ANS operates the NSFNet backbone under contract with the government.

The agreement had a few oddities. ANS was allowed to setup an independent "commercial" network over the same physical equipment used to operate the NSFNet backbone. By this device, ANS was basically allowed to offer commercial Internet connections to Fortune 1000 companies.

Access to the Internet for commercial concerns is a little labrynthine. Connected to the NSFNet backbone are 32 "Mid-level" networks such as Colorado Supernet, CERFnet, SURAnet, FARnet, THEnet, and others. These mid-levels accomplish the actual connections of most Universities to the NSFNet backbone. Additionally, they often make available low-cost connections to small businesses, research companies, and individuals as well as their University clientele. They were strongly encouraged to sell these connections commercially by NSF, who admonished them they must be come "self-supporting" within the next few years if they were to survive. Additionally, a couple of "vendors" offer connections to the Internet on a national basis - most notably Performance Systems International and UUnet.

ANS formed a "for-profit" subsidiary in June 1991 titled ANS Commercial and Research and began marketing Internet access to the Fortune 1000. One of their first commercial customers was DIALOG who were assured they would have access to the Internet. A number of the mid-levels balked at this situation and ANS was forced to convert DIALOG to a "research and education" status.

Uunet, PSI, CERFnet, BARRnet, Sprint, joined together to form the Commercial Internet Exchange (CIX) and establish their own separate commercial backbone.

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The result is that 32 mid-levels and at least two commercial organizations are vying for the right to sell access to the American Internet to the world. No one is sure just what that means, but it looks like money with the burgeoning corporate interest in interconnecting in all directions.

The problem arises from the fact that ANS is the defacto operator of the NSFNet backbone. They operate with a government awarded cash flow and control of the network. Worse, as a practical matter the other commercial vendors and all 32 mid-levels are ostensibly to be forced to contract with ANS for access to the network. And ANS had announced their intention to jack up the fee the mid-levels will pay based on the number of commercial customers they have signed up - as high as $325,000 annually. An announcement last fall that the backbone contract would be awarded to TWO vendors rather than just ANS with a third as routing supervisor looked like it would cool the fires. But a letter from Steve Wolff of NSF to ANS assuring them that they would be THE commercial provider of Internet connections was leaked and sent the entire situation into open warfare almost at the same time that President Bush signed the High Performance Computing Act into law - effectively dumping $2 billion in gasoline on the flames.

As a consequence, the Internet community is rapidly arming into two camps: ANS and the rest of the world. And the vague uneasiness of the academic community and mid-level networks with the aloof and profit-minded ANS group has exploded with enough fury to threaten the existence of the Internet in its current form. The other vendors are openly charging that ANS is being handed a government funded network and turned loose to market it without any regulation at all.

Performance Systems International, potentially the primary competitor of ANS, has charged that the NSF gave ANS preferential treatment.

It's not at all clear what will come out of the Congressional hearings, on the topic. But meanwhile rumors abound from the mild to wild. The usual conspiracy theory crowd traces collusion all the way to the White House with Presi-

dent Bush and IBM plotting to control the online world and cut the RBOC out of the action. On the milder side, most of the mid-level networks have refused to sign connection agreements with ANS and rumor has it that they are secretly discussing creation of a separate network called COREN with MCI as the contractor. Further speculation indicates that Al Weiss, head of ANS, will be the sacrificial scapegoat to mend the situation and his job is up in the air.

And there appears to be plenty to fight over. According to the Director for International Programs at the National Science Foundation, the following numbers represent the growth in connected HOSTS on the Internet. These hosts are located in 38 countries and represent systems anyone on the Internet can connect to directly and use, if public files are maintained on the system.

August 1981	**213**
October 1985	**1961**
December 1987	**28,174**
January 1989	**80,000**
January 1991	**376,000**
January 1992	**727,000**

As of February 1992, Internet e-mail connections were available in 106 nations and well over a million additional host machines with an e-mail only connection. Increasingly, anyone who is NOT connected to the Internet is becoming an island separated from the world. It would appear that ALL data connectivity will eventually connect to "The Internet" whatever that term might actually define. The current question seems to revolve around the advisability of building it with government dollars and bequeathing it to IBM/ANS as a gift. If we allow NSF to do so, it is doubtful that the ordinary grass roots modem user will be able to afford to play unless they want to view the online world through the dubious portal of the PRODIGY online service.

PINE MAIL PROGRAM

We started a bit of Internet coverage a little over a year ago with the uneasy feeling we were entertaining ourselves quite famously, but likely to leave most of our readership a little lost. The Internet and the world of the UNIX command line are somewhat esoteric for DOS users and access to the Internet for those unaffiliated with a University was at that time a bit of a patchwork item.

Oddly, we've received more requests for continued coverage of the Internet than any other topic. Many of our reader's DID obtain UNIX shell accounts with access to the Internet and they want info on using it.

For those accustomed to DOS machines, UNIX is an entirely new culture and not one easy to learn. The basic operating system features over 300 commands and there are hundreds of utility programs "common" on most machines. The command structure, documentation, and so forth, while powerful, are more than a bit cryptic.

The most basic function you might perform from a UNIX shell account is reading and responding to e-mail. Second on your list of things to do will most likely involve using a text editor. The most common editor in the UNIX world is a little number titled "**vi**". Most DOS users on first encountering this gem react in the "this must be a joke" posture. We'll undoubtedly hear from hundreds of ardent vi fans, but our read is that if you want to see the worst, most unlikely design for a text editor, **vi** deserves a look. I can't believe it ever occurred to anyone to do anything THAT way, and I still think it was some sort of practical joke designed by some diabolical programmer intent on revenge for some slight - real or imagined. I guess better he write an editor than a virus program. In fairness, it has been around forever and was undoubtedly a major advance over the UNIX **ed** command. I personally find Assembly Language programming a breeze compared to using **vi**.

In late 1989, a small group at the University of Washington in Seattle noted that a number of those on the faculty and staff were reticent to use the University's system. They embarked on a program to make e-mail easy to use and determined to build a "rubber room" mail program that naive users (we qualify) could use without hurting themselves. They succeeded.

At it's most basic, Internet mail on UNIX systems is handled by a program titled, appropriately enough, "mail". From the command line, you enter "mail" and the program displays any current messages awaiting your attention. While the mail program offers some reasonably powerful features, it's not particularly intuitive to use, the line editor is a bit basic, and new computer users certainly find it daunting.

There are several more advanced mail programs in wide distribution that can be used in place of mail. The most common is probably a program titled ELM but there are also users who favor MUSH. ELM features a full screen editor and a number of other niceties, but it's still focused a bit on power over ease-of-use.

The Washington group started with ELM and a text editor titled EMACS, both public domain programs with source code widely available. They used these programs to develop PINE. PINE originally stood for **P**ine **I**s **N**early **E**lm. The program was released in May of 1990.

Under the hand of the three primary authors, Mark Crispin, Mike Seibel, and Laurence Lundblade, the program has developed nicely. Version 2.20 was released on January 31, 1992. The editor is now quite integral to the mail program and it does provide an interface much easier for DOS users to employ. The program offers a simple menu, but the features are actually pretty complete with a folder capability allowing you to save both sent and received messages in whatever file folders you set up. It also has an address book database allowing you to assign aliases to long Internet addresses and simply address a message to the short name. The program also very nicely integrates the UNIX spell command to allow you to spell check your message simply by pressing **CTRL-T.** The spelling checker simply highlights misspelled words and allows you to correct them. It doesn't offer suggested alternatives, but it's a nice touch.

Rather than have a single prompt with twelve thousand command combinations available at your beck and call (assuming you could remember what they were), PINE has a menu structure and at any menu or function, a command bar at the bottom of the screen lists keys and what they do in a highlighted format

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that's reasonably easy to understand and use. **^ X** indicates a **CTRL-X** command will send your message. **^ M** indicates that the **CTRL-M** key combination will take you back to the main menu, and so on.

You may become so enamored of the editor in PINE that you might want to use it instead of **vi** for regular text editing chores. And you can. The editor is also available as a separate program titled PICO. Simply enter PICO and a file name and you're in business.

The net effect is that dealing with e-mail suddenly becomes easy. Better yet, while you struggle with MAIL or ELM, the chances are that PINE and PICO are already on your host system. Simply enter PINE instead of the MAIL command and it's yours to command. For those with shell accounts that don't have PINE available, the program source code is freely available from **ftphost.cac.washington.edu**. Comments about the program can be directed to **pine-bugs@cac.washington.edu** or to the authors, Mark Crispin (**mvc@cac.washington.edu**), Mike Seibel (**mikes@cac.washington.edu**), or Laurence Lundblade (**lgl@cac.washington.edu**).

NEW INTERNET MAIL STANDARD TO ALLOW AUDIO/VIDEO/FAX E-MAIL ENCLOSURES

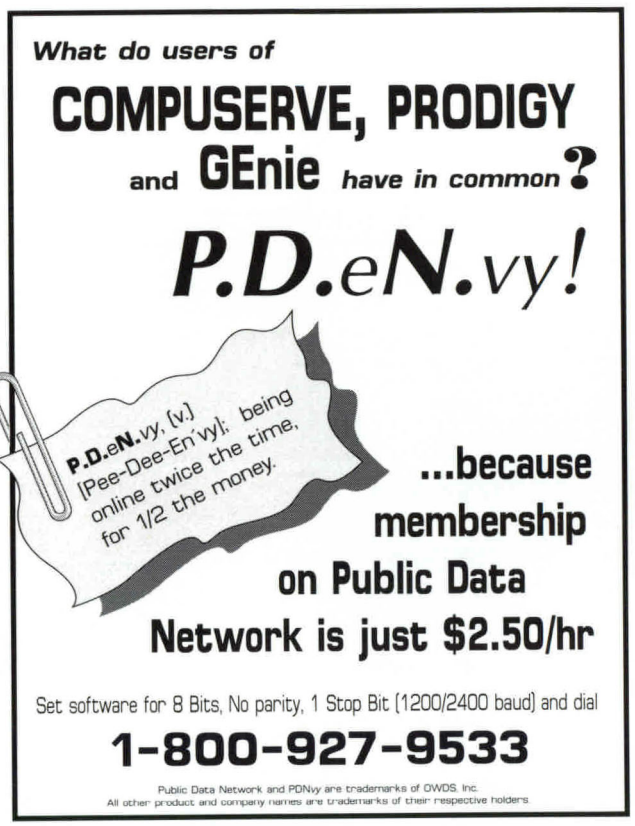
The Internet Engineering Task Force Internet Message Extensions work group has been working on a new draft standard that updates the **RFC-822** standard defining what e-mail looks like on the Internet. The new standard is titled ***Multipurpose Internet Mail Extensions*** (**MIME**) and will allow transmission of a variety of files across the Internet as e-mail, including binary files, fax documents, and eventually audio and video messages. It's being referred to as a multi-media multi-language capability for e-mail.

Authors of three Internet mail programs, ELM, XMAIL, and PINE have all announced their intention to incorporate MIME in the next release of their software.

Most Internet standards are embodied in documents termed **Requests For Comment** or RFCs. **RFC-822** defines the Internet mail standard specifying a structured mail header followed by an ASCII text message body. MIME will revise this RFC to add two new header fields: **CONTENT TYPE** and **CONTENT TRANSFER ENCODING**.

The **CONTENT TYPE** field indicates which of eight data types the message can carry. These include text, image, audio, video, message, binary, application, and multipart. For each of these general types, users can also specify subtypes indicating the specific media format. In this way, it could accommodate various video data formats for example. The data could be of general type **IMAGE** and a subtype of **GROUP III FAX**. The **MULTIPART** type allows users to send messages that are combinations of text, audio, video, etc. in a single message.

The **CONTENT TRANSFER ENCODING** field specifies the specific technique used to send 8-bit data within the 7-bit ASCII format that many Internet systems require. Two encoding tech-



niques are available at present: **base64** and **quoted-printable**. The base64 will be most widely used to send binary data.

The addition of these two fields into the RFC-822 mail header could dramatically change what can be sent via Internet e-mail. The immediate result will likely be the ability to include executable programs and graphics images in messages. In the future, video, audio and fax may become common elements of communication across a global e-mail network.

The group has also released a software program demonstrating the new e-mail capabilities. It's titled MetaMail and its actually an extension meant to patch existing mailers to offer some rudimentary features of the new mail standard. MetaMail can be used with mailers including Elm, Xmh, Xmail, Mailtool, EMACS Rmail, EMACS VM, and Andrew. The MetaMail software is freely available in the file mm.tar.z.

To retrieve Metamail, **ftp thumper.bellcore.com** and change directories using the **cd pub/nsb** command. Enter **get mm.tar.z** to fetch the file. The directory also contains the draft standard for the mail extensions in ASCII text format in **BodyFormats.txt** or in PostScript format in the file **BodyFormats.ps**.

The current documentation on the standard lies in two documents: ***Representation of Non-ASCII Text in Internet Message Headers*** by Keith Moore (**moore@cs.utk.edu**) and ***MIME (Multipurpose Internet Mail Extensions)*** by Nathaniel Borenstein (**nsb@thumper.bellcore.com**).

A new mailing list discussion group has been formed for Metamail and related issues titled **INFO-METAMAIL @thumper.bellcore.com**. To join, send e-mail to **INFO-METAMAIL-REQUEST@thumper.bellcore.com**.

Greg Vaudreuil serves as chairman of the Internet Message Extensions work group. He can be reached at **gvaudre@nri.reston.va.**

HYTELNET - HYPERTEXT GUIDE TO THE INTERNET

One of the most fascinating resources of the Internet is the ability to logon to a computer a continent or half a globe away. Dialing your local node, it's quite possible to have a flawless 14.4 kbps connection to a bulletin board or database in Finland in a matter of seconds - with no international long distance telephone charges to worry about - basically a free connection around the world.

The program that works this magic is called Telnet - not to be confused with the X.25 network that was at one time known as Telenet. From an Internet shell account, if you enter the command telnet and a host name, you'll often be greeted with the logon screen of that service.

There are now over **700,000** hosts connected to the Internet. By far the majority require you to have an existing account to do a remote logon using telnet. But several thousand offer general public access information services.

Faced with this wealth of possible connections, you may be a bit perplexed by the fact that despite knowing they're OUT there waiting for you, you'll be a bit hard pressed to come up with the name of one to connect to. They are mentioned in various news groups, and in text files floating about here and there. But generally, there hasn't been any good means of reliably finding out just what's available.

Peter Scott of the University of Saskatchewan Libraries Acquisition Department noted the deficiency. Using a Hypertext program titled **HyperRez**, he's created a Terminate and Stay Resident (TSR) popup program he calls **HYTELNET**. HYTELNET provides menu access to several over 500 University Libraries, Campus Information Systems, Bulletin Boards, and Databases providing gloriously detailed directions on how to connect to online services in fourteen countries. HYTELNET provides a popup explores map and guidebook to the Internet.

The current version **5.0** was released January 21, 1992 in the file **HYTELN50.ZIP**. The program is

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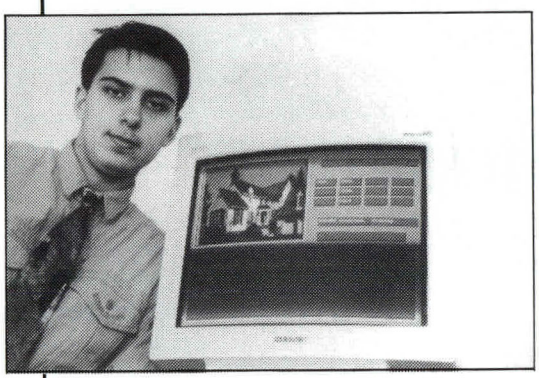

FIRST TERMINAL TO SUPPORT GRAPHICS ANNOUNCED!

Yes, we know *some other terminal programs make this claim. Any terminal program can download a GIF file in half an hour. Some contain a few canned images to give you a colorful opening screen. Others depend on ten year old schemes like NAPLPS where each individual screen has to be painted.*

FracTerm *supports 640X400 color VGA graphics downloaded to your screen in four seconds. (5K files over V32.bis modems). Pictures of faces, houses, anything. They are fractally compressed to an equation using a RISC i960 board ($4980 to Sysops) or by software. When you think of BBS or Multimedia applications, you cannot ignore a 5K color VGA file. It is an order of difference superior to JPEG 50K files, and* **FracTerm** *has software decompression built in for your users. No hardware is required!*

Check it out! *Call (604) 734-5800 HST DS, download the program, and then call us to arrange a site license. We know that you'll recognize a revolution when you see it in living color.*

Call John Smith at CARDZ 1 800 676-3111 Voice to discuss our future together.

Call **CARDZ BBS** at **(604) 734-5400 (HST) (604) 734-5901 (2400B),** or voice at **1-800-676-3111**

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FAX: (604) 732-8412

371,786 bytes in compressed form and unzips into **556** files comprising **1,361,920** bytes of data - fairly immense. To load the program, enter **HR.EXE**. To activate it - press **CTRL** and **BACKSPACE**. To make it go away - press **ESC**. And to unload it, **ALT-T**. That's about all there is to operation.

You can use HYTELNET to research what's available on the Internet without actually going ON to the Internet. But it really shines online. Since it requires but 60KB of memory, you can easily have it resident while you are online. Press **CTRL-BACKSPACE** and it pops up. The actual screens are somewhat plain, but they provide excellent instruction on precisely what to enter to bring up a system, what to enter at the logon prompt, passwords in the few cases necessary, and usually it provides the first couple of screens so you can see what it looks like.

The database is so extensive, we're not sure mentioning some of our finds is worthwhile. But we found dozens of Campus videotext networks we didn't know were out there, hundreds of libraries of course, and full text databases containing electronic versions of ***Aesop's Fables***, ***Alice in Wonderland***, the ***Koran***, the ***Book of Mormon***, ***Moby Dick***, a magazine index, and dozens more. Online Chat systems, FREENets, Bulletin Boards, NASA Databases, we even found a BBS devoted to use and care of Hewlett-Packard calculators. The result is that HYTELNET provides the easy to use MENU for telnet-reachable Internet resources that doesn't actually exist online. If you've wanted to go exploring with telnet but just didn't know where to begin, Pete's put it all there for you. No registration - freely distributed copyrighted work. Peter Scott, Acquisitions Department, University of Saskatchewan Libraries, Saskatoon, Saskatchewan, Canada S7N 0W0; **(306)966-6014** voice; **(306)966-6040** fax; **scott@sklib.usask.ca**

ZEN AND THE ART OF THE INTERNET

Books and reference documents on use of the Internet are fortunately becoming more prevalent. One custom on the net that we find most endearing is the posting of documents in a variety of forms. In the BBS world, text documents are almost always in ASCII format. Yes, you can download them and print them out. They are unfailingly and ever strikingly ugly things to contemplate once you have done so.

On the Internet, it is quite common to see documents with the file extension **.PS.** These denote PostScript files and are probably more common on the Internet due to the more widespread use of PostScript printers on campuses. But the result is that you can often download typeset documents in electronic form and print them out on a PostScript printer with much better effect than ASCII documents.

One of the most fascinating documents we've come across is really a 100 page book by Brendan P. Kehoe titled ***Zen and the Art of the Internet - A Beginners Guide to the Internet***. This "book" was released in its first edition in January of 1992. The copyright notice specifically grants permission to make and distribute verbatim copies provided the copyright notice is retained.

Zen came out of a need at the Computer Science Department of Widener University for some documentation describing the Internet for the benefit of new net users.

The book is admittedly a compilation of Internet information floating around in various documents. But it isn't simply collected. The overall presentation is quite unified and it is clearly a book written with a single editor presiding using those documents as reference.

It begins with some network basics on domains, IP addresses, how names and IPs are resolved, a description of Internet, BITNET, and UUCP and even briefly introduces the types of physical connections you may encounter.

One chapter is given entirely to electronic mail, how to use it, the anatomy of message headers, what it means when a message is returned to you undelivered, a description of mailing lists, what list servers are, etc.

Chapters also cover getting files via anonymous FTP, Usenet News Groups, using Telnet to access Library Catalogs interactively, tools you can use from the command line to find and chat with other users, commercial services such as Clarinet, organizations of interest, and references to other information resources on using the Internet.

The actual text to cover all this is 72 pages. So the treatment of any of these subjects is of necessity a bit brief. We found the mix of overall general context with a sprinkling of usable examples to be pretty charming really and for new users this book provides an excellent starting place and a good guide to other resources for further research. There are more intensive books on the Internet, but for a brief and readable introduction, you can't beat the price of this one. The file is available for ftp from ftp.sura.net **(128.167.254.179)** in the **pub/nic** subdirectory under the filename **zen-1.0.ps.** Bit it's also showing up on machines all over the network. The file is nearly 500 KB in size. The author can be reached as **brendan@cs.widener.edu**.

A more extensive introduction to the Internet is provided by NorthWestNet. The ***User Services Internet Resource Guide*** (NUSIRG). This **274+** page manual provides a slightly more turgid, but considerably more comprehensive overview of resources available on the net. Written by Jonathan Kochmer, the bug offers a couple of distinctive things to recommend it - most notably one of the most complete chapters on Internet applications for education we've come across. Nearly 30 pages are devoted to K-12 education issues including descriptions of K-12 Net, KIDSNET, pointers to Usenet Newsgroups of interest to educators, a marvelous list of mailing lists revolving around educational issues and more.

The book is quite Boardwatch-ish in that they demonstrate a propensity for including lists of things - lists of Midlevels offering Internet connections, lists of educational departments involved with Internet by state, contacts, names, addresses, telephone numbers.

Another section of some 40-odd pages is devoted to Scientific uses of the Internet and addresses Supercomputing issues from the ground up. Postscript files of the manual are available by FTP from **ftphost.nwnet.net** in the **nic/nwnet/user-guide** directory. A reasonably nicely bound printed version is available for **$20** from NorthWestNet, NUSIRG Orders, 15400 SE 30th Place, Suite 202, Bellevue, WA 98007; **(206)562-3000** voice; **(206)562-4822** fax; **nusirg-orders@nwnet.net**.

SUPREME COURT DECISIONS IN ELECTRONIC FORMAT BY FTP

Last issue we noted the availability of a menu driven listing of Supreme Court Opinions on Cleveland Freenet. Some callers may find it more accessible to fetch the files via ftp. Enter **ftp ftp.cwru.edu**. Then enter the command **cd hermes/ascii.** All the Supreme Court Decision files are readily available there for download.

NASA HEADLINE NEWS

NASA is distributing a brief daily newsletter through a fairly unusual technique using the **FINGER** command in the Internet. Normally, if you enter finger and a user domain address, it produces a biographic file produced by the user. NASA is simply posting a daily newsletter in the bio file for **nasanews @space.mit.edu**. As a result, the command **finger nasanews@space.mit.edu** will immediately call up the newsletter to your screen.

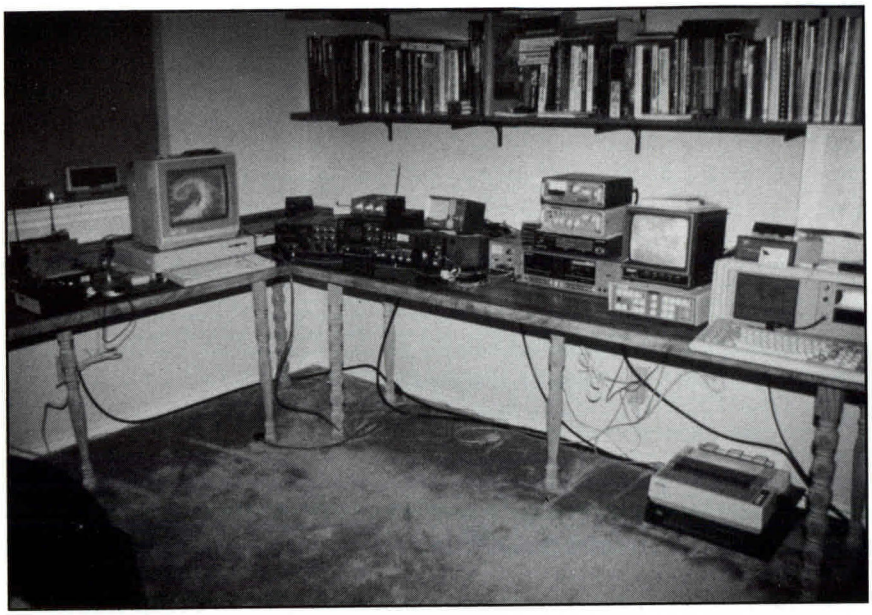
DIRECT DIAL

SATELLITE IMAGES BY MODEM - DALLAS REMOTE IMAGING GROUP

The quaint picture of the erstwhile HAM radio amateur faithfully pounding away into the night via Morse Code on the continuous wave radio rig he built himself has a certain charm. But it's a bit dated. With orbital satellites, packet radio, slow-scan tv, and satellite imagery, today's HAM is probably more interested in pictures than Morse Code. Two-way video to the space shuttle and amateur satellite launches are more the order of the day.

A group of HAM radio operators down in Texas have developed an interest in tracking satellites and specifically in building "ground stations" to receive National Oceanographic and Atmostpheric Administration (**NOAA**), Soviet, and Chinese weather satellite pictures. The group is called the **Dallas Remote Imaging Group** (DRIG) and they're headed by Dr. Jeff Wallach.

Wallach's real world career is with an image technology company that provides equipment to capture and store paper correspondence onto computer for the business world. But his real passion is satellite imaging. He



Dallas Remote Imaging Group Laboratory

operates the DRIG BBS from a remarkable lab in his home in Carollton Texas. With a roomful of radio receivers, specialized modems, and personal computers, Wallach captures the images transmitted by scores of government weather satellites, converts them to GIF images, and stores them on his BBS. The DRIG laboratory has satellite communications equipment to receive all frequencies from 100 KHz to 10 Gigahertz - effectively DC to sunshine in radio terms.

The BBS has actually been in operation since 1984 - originally a single line system using RBBS software. Today, DATALINK BBS operates at **(214)394-7438** on three telephone lines using PCBoard software. They expect to expand to six lines this month to serve their 4000 members worldwide. The system offers a treasure chest of over 2 gigabytes of data on satellite tracking, weather imaging, and other space related topics.

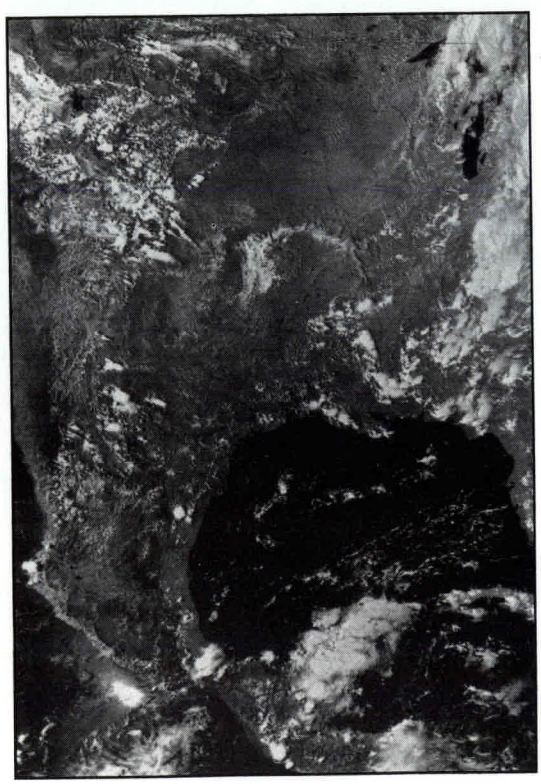
Most fascinating was a bulletin on how to build your own ground station to receive weather images from satellites. Essentially, it involves a radio capable of receiving frequencies at **137.500 MHz**, a demodulator to capture the digital data, and software to display the data on your personal computer. The article gives some detail of not only how to do it, but a full list of sources for each of the components and actual frequencies of the various "birds" that transmit such data. The data arrives on a **FM** modulated carrier as a **2400 HZ** tone carrying digital images much akin to transferring **GIF** picture files by modem.

The system has a number of actual images available for download in GIF format that you can use to see if these images hold any interest for you before you go out and start assembling your ground station. **LANDSAT** images may be captured as well.

To do all this, you also need to be able to detect where in the sky your target satellite is at any one time. Software is available to calculate this but you will need some current data on the satellite as well. This is known as Keplerian elements and they too are available on this system.

The service also carries data on some **5000** satellites including launch date, decay date, frequencies etc. Soviet Military Satellite frequency lists are available as well as US Military HF and VHF frequencies. Soviet space activity updates are online as well as NASA bulletins on satellites.

Wallach recently added CD-ROMS containing thousands of NASA/Voyager planetary mission images. All the information we saw was very well focused on the satellite theme



and seemed to be exhaustive in scope. The system asks for a **$30** annual donation and this does seem to be required to download from some of the areas.

In addition to running the system, Wallach also travels as an unpaid consultant to NASA to do presentations to educational institutions about the space program and how to set up their own satellite image capture stations for educational purposes at minimal expense. He also serves as editor of the Journal of the Environmental Satellite Amateur Users Group. This is a quarterly publication with news of new satellites, ads for products to capture images, and a very interesting view of the world from 830 kilometers up.

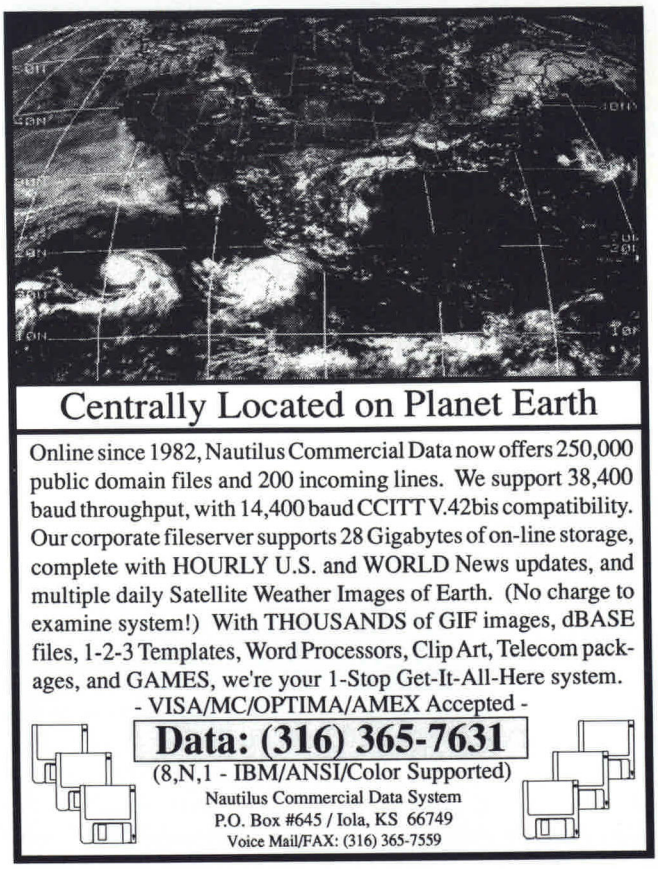
DATALINK appears to be one of the largest portals between the satellite imaging world and the BBS world. With a modem and PC, you can dial this system and access an incredible library of images from space, as well as information for those who want to do it themselves. Dr. Jeff Wallach, Chairman, Dallas Remote Imaging, PO Box 118053, Carrollton, TX 75011;**(214)394-7325** voice; **(214)492-7747** fax; **(214)394-7438** BBS.

ELECTRIC IDEAS BBS

The Bonneville Power Administration of the Washington State Energy Office operates a small, but interesting MAJOR BBS system titled the **ELECTRIC IDEAS BBS** at **(206)586-6854**. The system is dedicated to the exchange of ideas on how to use energy more efficiently in a commercial or industrial setting.

Electric Ideas features a calendar of events - mostly training programs on various energy technologies and techniques. A referral database lists various contractors and technology firms dealing with energy, and a Jobs database lists openings in the energy management and generation field.

The system uses Galacticomm's MAJOR BBS software on a single line and seems primarily dedicated to energy issues of interest to the Pacific Northwest. We did find some interesting files however. The **SMHYDRO.EXE** file contains the HYDROHELP ER program, a calculator to determine the horsepower and kilowatt hours that can be generated from a given stream flow. The program was provided by a woman who sells hydroelectric generation equipment to third world nations.



BBS'S OF THE BIZARRE

by Julia L. Wilkinson

KEELYNET

Forget Time/Life's Mysteries of the Universe series; a few calls to **KeelyNet BBS** in Texas at **(214)324-3501** and you'll have enough material on the fringes of science to compile a series of your own. When you sign on to the board, you are informed of KeelyNet's mission statement: "Dedicated to the free exchange of science-related information. Our primary interests are free energy, anti-gravity, field forces and their practical application for the restoration of our planetary ecology and the overall advancement of the human condition."

KeelyNet is named after John Keely, a 17th century inventor. Among his accomplishments were devising a motor than ran on steam, and figuring out a way to explode 3 drops of water to yield 27,000 psi (pounds per square inch). He also made a cannon, mineral disintegrator and microscope that could look into atoms.

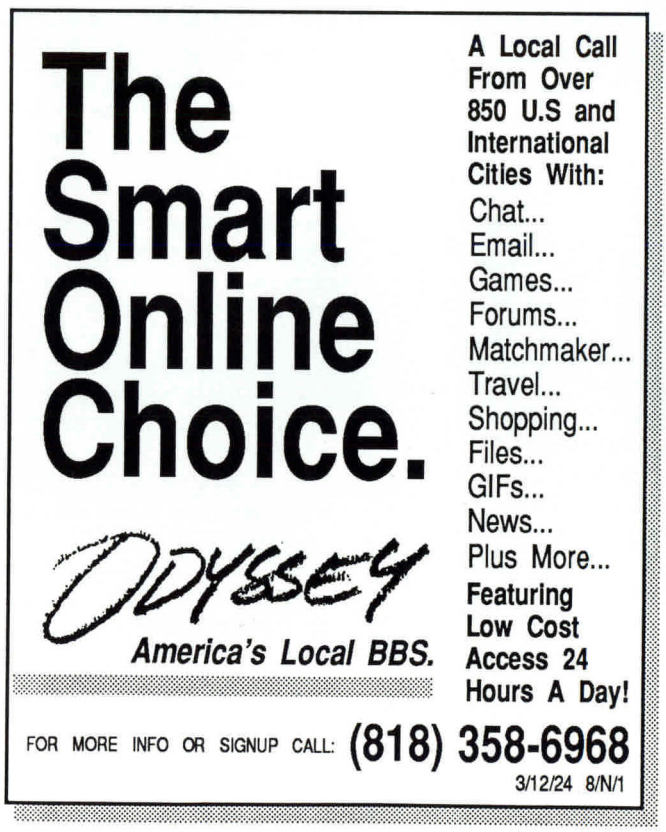
"The BBS was an economical way to get a lot of information out," says sysop Jerry Decker. The technology discussed on the BBS "will make Star Trek become real," says Decker. "We do want to study the technical. A lot of people who link up to our board have a technical or scientific background."

Topics covered on the BBS include levitation; UFO's (Decker notes there is "still no physical proof after 40 years"); Keely's work; invisibility; perpetual motion; anti-gravity and gravity anomalies; health risks, cures and advice; humor and jokes; and my personal favorite, "a car that runs on urine" (no more nasty gas station restrooms). There are also several utilities such as word processors and a speech generation program.

The KeelyNet biology section is the largest on the board. There is a complete listing of medical BBS's, as well as files on medical anomalies such as spontaneous human combustion. Among the more curious offerings is a piece written by Decker detailing his mother's account of a cure for cancer using electrical currents. ("The process involved the use of a white, chalky, flour-like powder which was mixed with water to form a paste. Electrodes leading from what appeared to be a battery were stuck to the paste which was rubbed on the cancer.") Decker writes that his grandfather's skin cancer, on the sides of the bridge of the man's nose, was cured in six days. It had been diagnosed as untreatable by the family doctor.

Later in the piece he explores "electrostimulation for health," noting that any electrical current flowing through the body will of necessity increase the ionic flow of gases and fluids, as well as the overall oxygen level. This gives a "rush" which might be misinterpreted as a "cure." Tending toward the empirical, Decker tried placing a piece of aluminum foil at the bottom of his bathtub, with one end attached to an electrode of a TENS unit and the other to the shower head (kids, don't try this at home). Decker grabbed the shower head after turning the water on and found he couldn't let go. After a "major mental effort to break the connection," he finally let go, and "felt like a million bucks"...people at work asked if he had been taking medication. (Decker emphasizes that he is "in NO WAY encouraging similar experiments from readers of this paper."). Don't worry, Jerry, I'll leave that up to the fearless sysop.

Another bizarro file in the medical section is a first-person account of a trip to Russia that led the writer to discover "pet AIDS." It seems that certain members of former USSR were getting romantic with Fido, an act which "overloads the animal's capacity to fight off invading micro-organisms in the form of sexual fluids." The writer explains that according to his Intourist host, sex is a major taboo in what used to be the Soviet Union, but "hormones don't care about Lenin." (One must remember the file was written before that country evolved into its current incarnation.)



Another file contains experimental techniques for lucid dreaming (directing or changing the content of your dreams). (The uploader notes that lucid dreaming is "the most fun I've ever had, and that's saying a lot, since I've had some terrific times while awake.").

You don't have to believe everything in the files on KeelyNet, but my bet is however skeptical you are, there is something there that will fascinate you. KeelyNet BBS, Vangard Sciences, PO Box 1031, Mesquite, TX 75150; **(214)324-3501** BBS.

CAJI BBS

The **Citizens Agency for Joint Intelligence** (CAJI) has offices in every state that collect information and do research, according to sysop Bill Cooper. "Every prediction we've made in the last five years came true," he says.

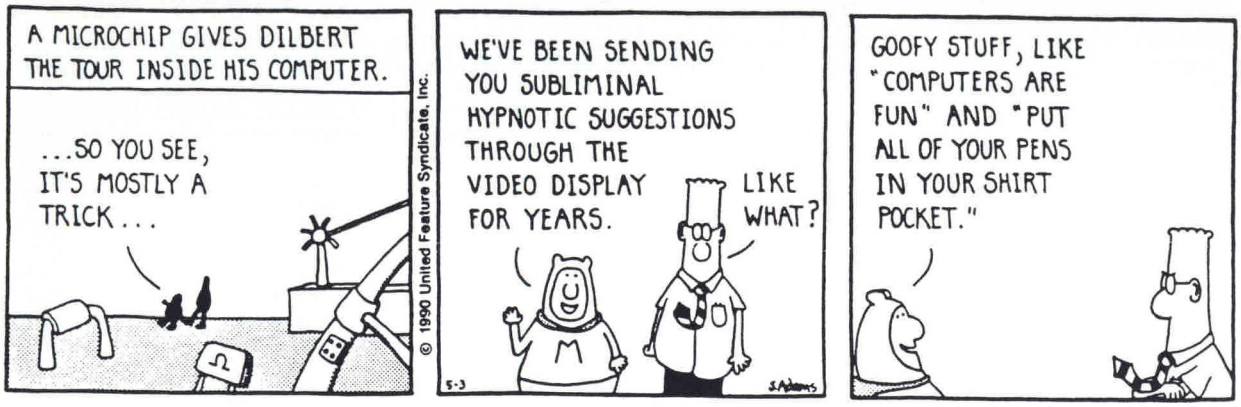
The files on **CAJI BBS (602)567-6725** is "the stuff you're not going to see on the six o'clock news. We believe 100% in freedom of speech, that no information should be suppressed." He notes that while there may be some wrong information on the board, it would be contrary to their credo to delete any of it; they believe no one should dictate what people see.

While the board is currently used by private researchers who have paid to be online, they are "fixing to go public," notes Cooper. "We are looking to establish a CAJI board in every state. There are no other boards that do what we do."

Cooper's desire to share suppressed information was fueled by his military background. He was in the Navy working in intelligence and is a Vietnam vet, and saw "how the real world is being hidden from the normal person."

"Wars aren't fought for reasons people think," adds Cooper.

Among the many interesting files on the board is a paper about "The Secret Government," in which Cooper proposes a hypothesis about a government cover-up of its relationship with alien beings. While he writes that he cannot guarantee all the information in the paper is true, Cooper reports that he personally saw a volume of secret



government study written by a task force formed after crashes of alien crafts in New Mexico in 1948.

Another file briefly describes an experiment which induces out-of-body experiences by using electricity to tickle the temporal lobe of the brain. "The subject typically feels a sense of floating, the sensation of an invisible presence being with them, and a feeling of being out of the body with vivid memories from childhood," writes the author.

Other subjects covered by the BBS include virtual reality, earthquake predictions, how to go back in time, aliens and UFO's, and AIDS and its origin. The file areas are divided into these categories: UFO Cover-Up, Books and Book Reviews, Religious Phenomena, Illuminati (The Order), Legal Information, Military, Law Enforcement, Constitution, Economic Issues, Satanism, Global 2000, New World Order, F.E.M.A., Kennedy Assassination, Intelligence Community, Software, Space, CAJI Newsletter, Computer Info, Gun Control, Drugs, and Mind Control. **CAJI BBS, (602)567-6725.** There is a subscription form available on the system; subscriptions are **$30** per quarter or **$80** for a year.

HAM RADIO BULLETIN BOARDS

Today's bulletin board community contains an enormous variety of individuals and embraces an equally enormous variety of topics and themes. It may be a little lost on most of those online the connection between the Amateur Radio community and the early BBS community. But the individuals involved in these two communities are not only similar in their desire to communicate - in many cases they are the same people.

This goes back to the birth of the personal computer. The first widely recognized implementation of a desktop personal computer was a TV Typewriter described in an Amateur Radio hobby magazine. The propensity for HAMs to wire up their own radio rigs evolved into many of the same people brewing up PCs from kits and plans. As the PC evolved, many of these same people moved into experiments involving modems and telephone communications. It will come as no surprise then to note that many of the luminaries key in the development of both PCs and bulletin boards had HAM call letters as well.

And the HAMs haven't really left bulletin boards, they've just been surrounded by newcomers who never learned Morse Code.

Stan Staten W3INK of Gaithersburg Maryland is typical. He put up his current BBS in September of 1984 and titled it with a variant of his call letters. **3WINKS BBS** operates today at **(301)590-9629** using RBBS software.

The system provides a number of HAM related information files including calendars for HAM radio classes, FCC examinations, and the perennial gatherings of Amateur Radio enthusiasts known as HAMFESTS. We also found a detailed description of the new Codeless Amateur Radio license offered by the FCC as of last year. Curiously, the system also provides a wealth of information about the Mormon religious faith.

More to our purposes, Stan maintains a list of over 200 electronic bulletin boards across the continent that either focus on HAM issues or carry significant information content on the topic of Amateur Radio. With Mr. Staten's permission, we herein present the 3WINKS List of Amateur Radio Bulletin Board Systems.

One area HAMs have moved into is packet radio. And there are numerous BBSs that you can access via airwaves rather than telephone lines. Stan operates a packet BBS as well as his "land line" system. Actually, he has somehow wed the two of them - passing e-mail back and forth in Fidonet format. His system offers a door program allowing landline callers to access the packet BBS. Stan Staten, W3INK, 12012 Cheyenne Road, Gaithersburg, MD 20878;**(301)977-7987** voice; **(301)590-9629** BBS.

AMATEUR/HAM RADIO RELATED BULLETIN BOARDS

From the W3INK HAM RADIO Land-Line BBS List of February 10, 1992 created by Stan Staten of 3WINKS BBS

TITLE	PHONE	LOCATION	CALL LETTERS/FIDO
THE MICRO ROOM	201-245-9091	NJ	WA2BFW FIDO 1:107/919
THE MEETING HOUSE BBS	201-785-1830	NJ	FIDO 1:269/104 N2CZF
BRUCE'S BAR & GRILL	203-236-3761	CT	
KA1YL BBS	203-238-4994	CT	KA1YL
INFO-LINK	203-295-8384	CT	FIDO 1:320/73
TRUMBULL-MINI	203-261-6434	CT	WA1QKS FIDO 1:141/370
THE DARK SIDE BBS	203-438-4721	CT	FIDO 1:141/745
GEMSTONE BBS	203-449-8747	CT	FIDO 1:320/157.
ORIONS NEBULA	203-438-9908	CT	N1CUI FIDO 1:141/705
ARRL BBS	203-665-0990	CT	W1AW (Is it still in service???)
TELETALK	203-799-7454	CT	FIDO 1:141/328
BILL VE2UB	204-785-8518	CANADA	
THE DATA CONNECTION	205-601-0917	AL	N4SZO N4PRQ FIDO 1:3625/465
THE BULLETIN BOARD BBS	205-758-5017	AL	W4WYP WD4DAT
BEARS BBS	206-237-3472	WA	WM7O
THE AA6ED PACKET GATEWAY	206-271-4657	WA	AA6ED
THE PRECEDENT	206-355-1295	WA	N7NIP FIDO 1:343/9
THE BRIAR PATCH	206-743-9452	WA	1:343/5
PUGET SOUND GATEWAY	206-848-9232	WA	FIDO 138/3 KG7JE
KA1SVC BBS	207-247-6225	ME	KA1VSC
WCPB	209-661-5355	CA	KM6HK FIDO 1:10/45
PC HAVEN	213-374-7929	CA	N6XQU FIDO 1:102/137
KENWOOD FACTORY BBS	213-761-8284	CA	
COM PORT ONE	214-226-1181	TX	FIDO 1:124/7009 WA5EHA
THE ONE STOP BBS	214-240-2069	TX	N5NMA
DATALINK BBS AMSAT	214-394-7438	TX	N5ITU
SMOKED ARMADILLOS	214-669-9645	TX	FIDO 1:124/5118 AA5SA
32 BIT BUS	215-244-3916	PA	
THE 5TH DIMENSION	215-827-7689	PA	K3DSM FIDO 1:273/304
BETTER AMATEUR RADIO	216-237-8208	OH	KB8NW
BILL	216-526-9482	OH	
CLEVELAND HAMNET	216-942-7516	OH	WB8APD
RADIO DAZE	219-256-2255		
PC-HAM	301-593 9067	MD	G3ZCZ
THE EARTHSTATION BBS	301-604-1589	MD	
3 WINKS BBS	301-590-9629	MD	W3INK
AROUND AND ABOUT	301-621-9669	MD	WA3TKW
DIAMOND JIMS	301-645-7964	MD	
WJ3P HAM EXCHANGE BBS	301-831-5954	MD	WJ3P
KINGS KORNERS BBS	304-768-9263	WV	KB8KAC
THE S.T.A.R BBBS	305-238-8851	FL	FIDO 1:135/17
THE RIGHT CONNECTIONS BBS	305-382-6687	FL	N4LDG FIDO 1:135/63
THE BASHFUL PERVERT	305-472-7715	FL	N4BP
TELCOM CENTRAL	305-828-7909	FL	KD4BBM FIDO 1:135/23
HEAD START BBS	305-836-0463	FL	N4ETS FIDO 1:135/96
FTW	307-328-1923	WY	N7PQZ (C-64)
GFRN BBS	310-541-2503	CA	WB6YMH
SOMEWHERE IN TIME	313-482-4436	MI	KE8JY/N8KJL FIDO 1:2200/159
THE BLACK HOLE BBS	313-879-7387	MI	1:120/36 N8MAX
AIR STUDIO	313-546-7045	MI	KA8NCR FIDO 1:120/216
FUN CITY USA!)	314-893-9166	MO	N0IWK FIDO 1:289/18
N2JEU BBS	315-697-7365	IN	N2JEU

AMATEUR/HAM RADIO RELATED BULLETIN BOARDS

From the W3INK HAM RADIO Land-Line BBS List of February 10, 1992 created by Stan Staten of 3WINKS BBS

TITLE	PHONE	LOCATION	CALL LETTERS/FIDO
LONGWIRE BBS	316-524-8153	KS	KA0ZZU
SOUTHSIDE BBS	317-535-9097	IN	KB9BVN FIDO 1:231/30
AMERICAN SILVER DOLLAR BBS	318-443-0271	LA	WB5ASD
ELECTRONIC COTTAGE BBS	319-582-3235	IA	KA0FDI KA0JAW 1:283/611
THE ROADRUNNER BBS	401-821-1457	RI	
AKSARBEN ARC BBS	402-289-4658	NE	WB0QPP
THE CAMEO BBS	403-295-7088	AB	VE6TAK FIDO 1:134/63
ALTA PACKET INFO NET	403-464-5069	AB	FIDO 1:342/7
TERRAPLEX	403-743-4696	AB	VE6CYR FIDO 1:342/104
HAMBOME BBS	403-922-4266	AB	FIDO 1:342/34
HAMS BBS	404-363-1640	GA	WA4CBT
THUNDER BAY TRADING POST	404-516-1282	MD	WA3ZLB
WA4BRO'S HAM BOARD BBS	404-552-0868	GA	WA4BRO
N7GXP HAMSHACK	406-458-9379	MT	
PCLOGIC WILDCAT BBS	407-338-8486	FL	W4NVC
PCLOGIC	407-879-4823	FL	W4NVC
ATLANTA AMATEUR RADIO CLUB	404-393-3083	GA	
LOCKHEED ARC BBS	404-949-0687	GA	
HAMBBS	408-267-6396	CA	KB8FOU
THE HOUSE OF ILL COMPUTE	408-338-6860	CA	FIDO 1:216/21
SARATOGA CLONE	408-395-1402	CA	WA6LYZ/WD5ICZ
PD SOFTWARE EXCHANGE	408-745-0880	CA	
MACSCIENCE BBS	408-866-4933	CA	FIDO 1:143/36
THE AMATEUR RADIO BBS	410-625-0817	MD	WB3FFV
ALLEGHENY-KISKI	412-226-7357	PA	KA3NVP
RAD BOARD	412-573-0537	PA	
BEAVER VALLEY ARA BBS	412-775-7536	PA	KA3CYW
MILWAUKEE HEATH USERS GRP	414-548-9866	WI	KA9TGN
NO-NAME RBBS	415-481-0252	CA	N6MON RBBS 8:914/101
BBS-JC	415-961-7250	CA	K6LLK
THE BLACK HOLE BBS	419-228-7236	OH	KB8BMQ FIDO 1:234/16
DECKMAN'S EXCHANGE	502-267-7422	KY	N4VEH
EXPERIMENTER'S ANONYMOUS	503-232-9600	OR	FIDO 1:105/55
THE ROSE	503-286-3855	OR	FIDO 1:105/7
MICROBITS	503-285-0378	OR	
PURGATORY BBS	503-370-9739	OR	FIDO 1:105/605
THE WIRELESS BBS	503-452-8654	OR	WB7VHB
HELPNET OF BATON ROUGE	504-273-3116	LA	W5KGG FIDO 1:396/101
THE DIGITAL COTTAGE	504-897-6614	LA	K8VDU FIDO 1:396/5.7
SALT AIR	508-385-3427	MA	KQ1K
THE CUL-DE-SAC BBS	508-429-8385	MA	WA1YDL FIDO 1:322:360
WAYSTAR BBS	508-481-7147	MA	
PLEASANT VALLEY BBS	508-688-1348	MA	KA1MGO
HAM SHACK BBS	508-949-3590	MA	
SECRET BBS	508-998-6434	MA	FIDO 1:101/873
THE DATA WAREHOUSE	509-325-6787	WA	FIDO 1:346/9
EWARG	509-534-7924	WA	WS7I FIDO 1:346/3
MIND'S EYE BBS	512-323-9111	TX	FIDO 1:382/76
THE ELECTRONIC AVENUE	512-359-1748	TX	KA5THB FIDO 1:387/306
THE ANTENNA FARM BBS	512-444-1052	TX	
HAMS ON HEALTH-LINK	512-444-9908	TX	KB5IN FIDO1:382/5
SOUTHERN CROSS BBS	512-670-0800	TX	WA4RXK 1:387/615

AMATEUR/HAM RADIO RELATED BULLETIN BOARDS

From the W3INK HAM RADIO Land-Line BBS List of February 10, 1992 created by Stan Staten of 3WINKS BBS

TITLE	PHONE	LOCATION	CALL LETTERS/FIDO
THE 128 P.C.	512-827-1025	TX	FIDO 1:387/1101
THE ARMADILLO BBS	512-837-2003	TX	N5OWD FIDO 1:382/32
LIGHT IN THE DARKE BBS	513-547-3313	OH	WA8RUO FIDO 1:108/210
KIC-BBS	513-762-1115	OH	N8KTW K8CO FIDO 1:108/89
PME-FIDO BBS	513-777-1234	OH	WB8BFW
MELNIBONEAN MANOR	513-851-6454	OH	
VE2MMM AMATEUR RADIO BBS	514-624-5651	CANADA	FIDO 1:167/230
THE LONG ISLAND AR BBS	516-368-4979	NY	N2MCS
HAM IT UP BBS	516-399-1375	NY	KE2NK
AMATEUR RADIO SELLING POST	516-581-1896	NY	
NO FRILLS PLUS HAM BBS	516-661-3643	NY	
DATALINK BBS	516-862-8764	NY	KB2KUR FIDO 1:107/241
KITCHNER-WATERLOO AR BBS	519-578-9314	ON	VE3MTS FIDO 1:221/177
NEIGHBORHOOD NET	602-495-1797	AZ	KB7DJE FIDO 1:114/24
THE LEGAL BEAGLE	603-883-4466	NH	K1TCD FIDO 1:132/115
THE GRAPEVINE BBS	604-764-4672	BC	FIDO 1:153/220
PICS ONLINE(SM)	609-654-0999	NJ	N2LQH FIDO 1:266/21
PINELANDS RBBS	609-859-1910	NJ	W2XQ FIDO 1:266/32
JERSEY DEVIL CITADEL	609-893-2152	NJ	K2NE FIDO 1:266/33
HAMLINK	612-HAM-0000	MN	K0TG FIDO 1:282/100
THE ENTERPRISE BOARD	612-571-3290	MN	N0JVD FIDO 1:282/60
SOUTH PARKING LOT	614-351-2274	OH	FIDO 1:226/330
CROSS-FIRE BBS	614-294-5336	OH	FIDO 1:226/170
HAM BBS	614-895-2553	OH	N8EMR
LEBANON LINK	615-443-2237	TN	N4SCT FIDO 1:116/26
THE SYSTEM	617-254-4656	MA	K1KLZ
THE GARDEN SPOT	617-545-6239	MA	NS1N
BAYSTATE BBS	617-598-6646	MA	
TOM'S BBS	617-698-8649	MA	KA1TOX FIDO 1:101/470
THE G3KFN BOARD	619-256-7250	CA	G3KFN
RADIO SPORT BBS	619-279-3921	CA	WB6BDY
LAKESIDE WILDCAT! BBS	619-390-7328	CA	N6CQW FIDO 1:135/63
HAM/SHORTWAVE BBS	702-368-0846	NV	FIDO 1:209/730
FREQUENCY FORUM	703-207-9622	VA	N4ULS
THE CAPITOL CONNECTION	703-280-5490	VA	KB4ZSS
THE MIDNITE RIDER	703-591-5744	VA	
KC3OL BBS	703-689-7156	VA	KC3OL
AMRAD BBS	703-734-1387	VA	
DAS SPITZEN SPARKEN BOARD	703-791-6198	VA	WD4AZG
The Holt BBS	704-263-5309	NC	
MICRO OVERFLOW	708-355-6942	IL	AF9M
SAMSON BBS	708-394-0071	IL	KB9DIP FIDO 1:115/108
THE HAM HOUSE BBS	708-432-4285	IL	FIDO 1:115/777.10
THE ELK GROVE REPEATER	708-529-1586	IL	FIDO 1:115/529
BILL'S BBS	708-674-1638	IL	
ABBS	708-844-0183	IL	
MEDS/N9BKM BBS	708-982-1123	IL	N9BKM
THE FAR POINT RELAY	713-463-8324	TX	FIDO 1:106/8324
THE BREAKFAST CLUB	713-579-8979	TX	FIDO 1:106/992
STORMY WEATHER II	713-644-4345	TX	
CELL BIO BBS	713-798-4955	TX	FIDO 1:106/9636 K2TNO KB5NFN.
ACOM II	713-879-1448	TX	
THE COMPORT	713-947-9866	TX	FIDO 1:106/18 KE5WJ

AMATEUR/HAM RADIO RELATED BULLETIN BOARDS

From the W3INK HAM RADIO Land-Line BBS List of February 10, 1992 created by Stan Staten of 3WINKS BBS

TITLE	PHONE	LOCATION	CALL LETTERS/FIDO
PC EVE	713-955-7564	TX	WD5GAZ
T.E.L. NET SYSTEMS #2	714-597-7858	CA	KC6ZOL FIDO 1:207/107
F.O.G.	714-638-2298	CA	N6GIS MAX 1:103/100
FAMILY BONES	714-640-0894	CA	K6HMS FIDO 1:103/903
HAMLINE	715-258-0986	WI	N9BKJ
THE SHACK BBS	716-427-8423	NY	Fido 1:260/245
THE SHACK TOO	716-288-5848	NY	Fido 1:260/232
VECTOR BOARD	716-544-1863	NY	
NF2G ONLINE	716-663-8478	NY	NF2G FIDO 1:260/218
HIGHLAND BBS	716-761-6460	NY	N2JYG
VACCUMN VALLEY BBS	717-323-1645	PA	N3DQC
TEC-BOARD	717-561-8145	PA	KA3ADU
KB7UV ROSERVER/PRMBS	718-956-7133	NY	KB7UV
THE COLO. SPRINGS HR BBS	719-390-5318	CO	WB0BLV FIDO 1:128/61
THE MAV PLUS BBS	801-634-3655	UT	KB4YHB FIDO 1:15/10
THE BYTE BUCKET BBS	803-871-3076	SC	N4PGN
BEN & CHERYL BBS	804-261-1819	VA	FIDO 1:264/166.6
THE COMPUTER FORUM BBS	804-471-3360	VA	KF4GL
THE FLAME THROWER	804-550-3338	VA	
TIDEWATER MESSAGE EXCHANGE	804-622-9002	VA	KA2YXH
DIGIT TECHNICAL BBS	804-898-7493	VA	K4UMI
ODDX	804-930-9563	VA	WB8SCG
CSC CONSULTING BBS	805-491-0319	CA	K6IYK
CVACC	805-499-5699	CA	KD6AEJ FIDO 1:102/1002
INDIANA ON-LINE	812-332-7227	IN	WB9LWQ/KC9HI
PAC-COMM, INC. BBS	813-874-3078	FL	
HAM ON RYE BBS	814-333-4111	PA	KA3HOW
HOWARD'S NOTEBOOK	816-331-5868	MO	FIDO 1:280/25
THE ARCHIVE BBS	817-447-1969	TX	AA5MM FIDO 1:130/22
TEXAS CONNECTION	817-540-1835	TX	
ANIME LANE BBS	818-762-3695	CA	KC6VMP FIDO 1:102/833
R&D BBS	819-772-2952	CANADA	FIDO 1:163/506
MARTY'S PLACE	903-753-0485	TX	N5KBP FIDO 1:19/62
THE HOT MUDDY DUCK BBS	904-651-8684	FL	N4HMD
ANCIENT CITY WIRELESS	904-823-3513	FL	FIDO 1:3620/9 KC4TDS
PLANET SHADOWSTAR TBBS	908-494-3417	NJ	N2HGY FIDO 1:107/344
MICROPHONE TBBS	908-494 3649	NJ	
ALBANY AMATEUR RADIO CLUB	912-435-9466	GA	W4MM FIDO 1:3617/6
NAMU BBS	913-273-1550	KS	WV0S
THE RED ONION EXPRESS	914-342-4585	NY	FIDO 1:272/31
COYNET AMATEUR RADIO BBS	914-485-3393	NY	WB2COY
JOE BROWN'S BBS	914-667-9385	NY	KB2NBN FIDO 1:272/39
HAMNET BBS	915-653-9077	TX	N5JZZ FIDO 1:383/4
THE CD-ROM BBS	915-673-8014	TX	AA5WF FIDO 1:392/6
TELE-PORT	915-944-1436	TX	N5OZX/AA5KG FIDO 1:383/8
AMATEUR RADIO CBCS	916-366-5531	CA	W6IDS FIDO 1:203/111
WA6RDH	916-678-1535	CA	WA6RDH
QST	916-920-1288	CA	WA6AXZ FIDO 1:203/730
STARFLEET ACADEMY BBS	916-985-4041	CA	KC6IRK FIDO 1:203/57
DX-BBS	916-992-0923	CA	W6GO
CMOS	918-241-2667	OK	
THE HAM RADIO EMPORIUM	918-272-4327	OK	WA4BFE FIDO 1:170/801
ANAWAH MINISTRIES BBS	918-775-9102	OK	N5FWM FIDO 1:19/115
THE C= HAM BBS	919-455-0618	NC	WF0L

BOARDWATCH LIST OF BBS LIST KEEPERS

BBS LIST TOPIC	LIST AUTHOR/EDITOR	CONTACT BBS	TELEPHONE
Amiga BBS Lists	Captain Chet Solace	Exactus Info Service	(707)524-2548
Apple II BBS with Internet con	Morgan Davis	pro-sol	(619)670-5379
Area Code 215 - Philadelphia	Ron Brandt	Satalink BBS	(215)364-3324
Area Code 517 - Mid-Michigan	Rick Rosinski/SAMM	Wolverine BBS	(517)695-9952
Area Code 609 - New Jersey	Ron Brandt	Satalink BBS	(215)364-3324
Arkansas Area 501	Bob Underdown	The Gaslight BBS	(501)444-8420
ASP BBS Member List	Bob Ostrander	PBS-BBS	(317)856-2087
Astronomy/Space BBS	John Pickens	Starbase III BBS	(209)432-2487
Atlanta Area 404	Rodney Aloia	INDEX System	(404)924-8472
Atlanta Area 404	Online Atlanta Society	OASIS	(404)627-2662
Austin Area BBS List AC 512	Michael Allen Menoskey	-=ACE*BBS=-	(512)258-9989
Autocad Related BBS	Jason Osgood	Alacrity BBS	(206)643-5477
Baltimore Area 301	Phillip Bailey	Baltimore BBS News	(301)633-7870
BBS With Handicapped Focus	Bill McGarry	Handicap News BBS	(203)337-1607
Central California Area 805	Larry Honore	His Board	(805)652-1478
Chicago	David Nathan	HURK BBS	(708)801-0823
Chicago	Colby Jordan/Peter Anvin	Stillwaters	(708)403-2826
Cleveland Area 216	Eric Rickin	Wine Cellar	(216)382-2558
Dallas/Ft Worth Area 214/817	Mark Robbins	Second Sanctum	(817)784-1178
Darwin National BBS List	Meade Frierson	USBBS Update Line	(202)547-3037
Denver Colorado AC 303	Bob Voorhees	Professional System	(303)740-2223
Desktop Publishing BBS	Frank Atlee	Byrds Nest	(703)671-8923
Detroit Area 313	Horst Mann	Tony's Corner	(313)754-1131
Engineering Related BBS	Arthur Petrzelka	Computer Plumber	(319)337-6723
Geneology Related BBS	Richard A. Pence	NGS-CIG	(703)528-2612
Graphical User Interface BBS	David Shapiro	The Gooey (GUI) BBS	(212)876-5885
Ham/Amateur Radio BBS	Stan Staten	3WINKs BBS	(301)590-9629
Handicapped Issues BBS	Richard Barth	HEX BBS	(301)593-7357
Houston Area 713	David E. Wachenschwanz	Atomic Cafe BBS	(713)530-8875
Kansas City Area 816/913	Roy Timberman	Sound Advice	(816)436-4516
Kitsap County Washington	Michael Schuyler	Quicksilver BBS	(206)780-2011
List of Gay/Lesbian BBS	Eric Blair	S-TEK BBS	(514)597-2409
Maine BBS	Eric Rodzen	MaineNET BBS	(207)767-1273
Massachussetts Area 508/617	Dave Goodenough	Wyzard's Castle	(617)825-3135
Medical Issues BBS	Edward Del Grosso	Black Bag	(302)731-1998
MIDI Music BBS	Lee Smith	MIDImaze BBS	(615)877-5528
Milwaukee Area 414	Jim Belot	The Keep BBS	(414)372-3488
National Adult BBS List	Clayton Manson	Titan BBS 1:3612/140	(904)476-1270
New Jersey Area 201/609/908	Wayne R. Morton	Praedo BBS	(609)953-0769
New Orleans BBS List	Jeff Jones	Southern Star BBS	(504)885-5928
NY/NJ/CT/PA/DE		Network One BBS	(212)628-5486
Ontario Area 705	Alex Draper	Cottage Country BBS	(705)835-6192
Open Access UNIX Site List	Phil Eschallier	LGNP1 (login:BBS)	(215)348-9727
Orlando Florida AC 407	Matt Drury	London BBS	(407)859-2243
OS/2 BBS Systems	Pete Norloff	OS2/Shareware BBS	(703)385-4325
Portland Oregon BBS	Lisa Gronke	DawGone Disgusted	(503)297-9145
Raleigh NC Area Code 919	Mike Stroud	Micro Message Svc.	(919)779-6674
Republic of South Africa	Henk WOlsink	Catalyst BBS	(041)34-1122
Rhode Island Area 401	Mike Labbe	Eagle's Nest	(401)732-5292
Rochester NY AC 716	Jerry Masefield	Pigeon Coop BBS	(716)262-2612
San Diego, CA AC 619	Ron Dipold	Computor's Edge	(619)573-1675
Seattle AC 206/West Washington	Bob Dinse/Nanook	Eskimo North	(206)367-3837
Selected BBS	Joseph Caplinger & Son	J&J's BBS	(513)236-1229
South Florida Area 305/407	Eric Thav	Silicon Beach BBS	(407)276-3750
South Jersey Area 609	Dave Schubert	The Casino EBBS	(609)561-3377
Southern California	Mike Hefferman	SOCAL Corner	(213)422-7942
The List National BBS List	James Toro	PDSLO (The List)	(516)938-6722
Tulsa Oklahoman Area BBS List	Linda Hargraves	Access America	(918)747-2542
U.S.S.R. BBS List	Serge Terekhov	Court Crimson King	7-3832-356722
Washington DC BBS List	Mike Focke	Interconnect	(703)425-2505
Wisconsin 608		JW-PC Dataflex.HST	(608)837-1923

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The Anti-Mystics BBS (209)431-1921 Fresno, CA since 10/90. Sysop: Don Funderburg. Using RBBS 17.3C with 1 line on MS-DOS 80386 with 150 MB storage. Hayes at 2400 bps. No fee. Do you like to argue? Then TAM is for you. Issues being debated in a heated but intellectual manner are CREATION v EVOLUTION, IS THERE A GOD, POLITICS, and more. No censorship is practiced! There is a special section, ATHEIST SUPPORT GROUP.

Computers & Dreams BBS (212)888-6565 New York, NY since 01/91. Sysop: William Stewart. Using PCBoard 14.5a/E6 with 6 lines on MS-DOS 80486 with 760 MB storage. U.S. Robotics at 14400 bps. No fee. New York City's BEST BBS! You don't believe us? Well call and find out for yourself! IT'S FREE! How can you go wrong? Dozens of GAMES, thousands of FILES, USA Today & Boardwatch Magazine Online, WorldNet MAIL, lots of PRIZES, CD-ROM Drives and MUCH MORE!

User-To-User (214)492-6565 Dallas, Texas since 00/00. Sysop: Kevin, Will, Randy, and Kyle. Using PCBoard 14.5a with 6 lines on MS-DOS 80386 with 2500 MB storage. U.S. Robotics at 14400 bps. $20 Hourly fee. Over 250+ UseNet, FidoNet, and RIME conferences. Home of the great TELEMATE communications package. Online Games. Offline Readers. THOUSANDS and THOUSANDS of files. Online Chat. PCPursuitable: TXDAL. Nodes 1 and 2 are FREE!

The Round Table BBS (215)678-0818 Reading, Pennsylvania since 03/90. Sysop: Dan McCoy. Using PCBoard 14.5/E6 with 5 lines on MS-DOS 80386 with 1300 MB storage. Zoom at 2400 bps. $30-55 Annually fee. USRobotics HST/DS at 215-670-5323. 2 CD-ROM's On-line w/ an additional 1.2GB & 30,000 Files. Carrying all the RIME Conferences w/ select Conferences from SmartNet, Newlife, RaceNet & RF-Net. Over 350 Conferences. USAToday, ODMR, & others.

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BOOK STACKS UNLIMITED, INC. (216)861-0469 CLEVELAND, OHIO since 03/92. Sysop: CHARLES STACK. Using TBBS 2.2 with 8 lines on MS-DOS 80486 with 540 MB storage. Multitech at 9600 bps. No fee. On-line bookstore and reader's conference with over 600,000 titles. Search for books by author, title, or subject. Pick your titles, place your order, and we'll ship them direct to you. Earn Bookmarks for free books. VISA/MC/AMEX/DISCOVER accepted.

The Comm-Post (303)534-4646 Denver, Colorado since 06/86. Sysop: Brian P. Bartee. Using TBBS 2.2 with 8 lines on MS-DOS 80386 with 2500 MB storage. U.S. Robotics at 14400 bps. $50 Annually fee. An ASP-Approved BBS with one of the finest collections of IBM-Compatible Shareware. Many areas have free download access including an extensive library of Astronomy Software & Data files. Access to hundreds of Message Echos. The Friendliest BBS around!

Pinecliffe BBS (303)642-7463 Pinecliffe, Colorado since 01/82. Sysop: Craig Baker. Using Ultrabbs 2.09Beta with 10 lines on MS-DOS 80386 with 5100 MB storage. U.S. Robotics at 14400 bps. No fee. Largest BBS in RockyMtn Area! FREE BBS (but $20/yr gets 2hrs/day! $100 LIFETIME membership!) 27,000 zips. CD-ROMS online. Games. Home of CDBREG -- allows immediate upgrades with credit card. Sysop also a computer store. NightOwl Rom $79. Help us grow!

Stoic Financial BBS (303)940-7746 Wheat Ridge, Colorado since 08/91. Sysop: Richard Hiatt. Using WildCat 1.03 with 1 line on MS-DOS 80386 with 120 MB storage. Hayes at 2400 bps. No fee. Financial Information on all markets, commodities, stocks, futures and options. Gif charts, spreadsheet ready templates, 1-2-3 ready price history files. Dir. of Investment & Trading Professionals. Educational & Technical info on trading strategies.

Chicago Syslink (312)622-4442 Chicago, Illinois since 06/81. Sysop: George Matyaszek. Using TBBS 2.2M with 11 lines on MS-DOS 80386 with 130 MB storage. Multitech at 9600 bps. $20 Annually fee. When you're ready for some interesting Online Interactive Games (30+), and some very interesting people to chat with Online, give us a call! We also feature a good selection of files, magazines, other FUN things to do. Call right NOW!

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EzPC(tm) (414)962-9256 Milwaukee, WI since 04/90. Sysop: Phil Thien. Using TBBS 2.2M[2] with 2 lines on MS-DOS 80386 with 600 MB storage. U.S. Robotics at 14400 bps. No fee. Home of Electrik Text(tm), a powerful, fast (indexed) keyword searching engine w/ AND/OR/NOT and nesting capabilities. Search 8-MB of USA Today in only seconds! Also the home of the Reseller Forum for computer dealers/VAR's (registration required).

Cul-de-Sac Bar & Grill (508)429-1784 Holliston, Massachusetts since 03/85. Sysop: Pete White. Using TBBS 2.2M with 5 lines on MS-DOS 80286 with 380 MB storage. U.S. Robotics at 14400 bps. $45 Annually fee. The home of many TBBS/TDBS software packages, and an almost continuous beta site for many TBBS/TDBS software authors. Like Ben Cunningham's 10,000 message system with full screen editing and quoting, and Jeff Johnsons On-Line Sales Manager.

Mirage-VA Presents: Another Fine Service (703)264-3962 Herndon, VA since 10/90. Sysop: Tully Mars. Using GAP 6/M with 3 lines on MS-DOS 80386 with 500+ MB storage. U.S. Robotics at 38400 bps. $29+ 1mos-4yrs fee. Hottest GIF & Animations anywhere for the discriminating Adult. QUALITY beats QUANTITY at Mirage-VA. We make & take our own original photos for scanning, so you always get fresh, new graphics. Scanning Services. 16550afn Chip/Com Card Sales. "FUD" home.

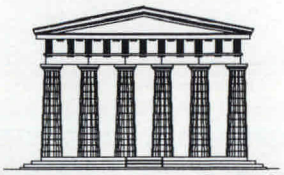
THE PROMISED LAND (715)387-1339 Marshfield, Wisconson since 01/90. Sysop: Tim Brown. Using Custom Major BBS with 16 lines on MS-DOS 80386 with 2500 MB storage. U.S. Robotics at 9600 bps. $0.60 Hourly fee. 11,000+ files for WINDOWS, IBM, AMIGA, APPLE, MAC, ATARI, & C64. Active Windows Users Conference/ Group. Live Teleconferences, Private E-mail, Online Multiplayer Games, Regional/ National Conferences. 2HR FREE DEMOPAK (say you saw it in BoardWatch!)

The Forvm BBS (718)966-8637 Staten Island, New York since 11/90. Sysop: David Centurion. Using PCBoard 14.5A with 5 lines on MS-DOS 80386 with 9500 MB storage. U.S. Robotics at 14400 bps. $35 Quarterly fee. We offer an extensive IBM, AMIGA & MAC Software. We are full members of IMPERIAL WARGAMERS NETWORK, PC-RELAY, FIDONET, USA TODAY, BOARDWATCH & many more. If you are into WARGAMES this is the BBS to call. We have custom games, contests etc. Call today!

The EARTH ART (TM) BBS! (803)552-4389 North Charleston, South Carolina since 12/91. Sysop: Bob Chapman (Alias: "Top Duck"). Using PCBoard 14.5a/D with 1 line on MS-DOS 80386 with 669 MB storage. U.S. Robotics at 19200 bps. No fee. The Home of GreenNet (TM) - The New FREE International Environmental Echo & The International Duck Stamp Print Exchange (TM)! Featuring Satellite Up/Downlink with 9600 Baud From Sky By Dish & The World's First Online Wildlife Art Gallery! Visit Us NOW!

THE Imperium BBS (908)706-0321 Middletown, N.J. since 01/91. Sysop: Mike Mack. Using PCBoard 14.5 with 3 lines on MS-DOS 80486 with 3000 MB storage. U.S. Robotics at 19200 bps. $65 Annually fee. The Imperium supports IBM, MACINTOSH, and AMIGA. In the IBM section alone, we have 25,000+ files. We also have 300+ PCRealy networked conferences. Many Online Doors, Including Mail Door in .QWK format. We have game tournaments too !! Call us today !!

The Somerset Central BBS (908)846-7981 Somerset, New Jersey since 07/81. Sysop: Frank A. Petillo. Using TBBS 2.2M16 with 7 lines on MS-DOS 80486 with 4500 MB storage. U.S. Robotics at 19200 bps. No fee. The Largest BBS in N.J. with over 4.5 gigs online storage, large echomail msgbase, multi-line chat & games, newest public domain software with 3 CD roms ONLINE! Call today for the best in BBSing. 1500+ callers active to chat with or get answers.



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BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS AND ON-LINE INFORMATION SERVICES - APRIL 1992

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
InfoHost Demo BBS	(201)288-7792	Demo BBS for InfoHost BBS Software - Multiline - Database	A-Comm Electronics Inc.	Hasbrouch Heights ,NJ
SEAboard!	(201)473-1991	Support system for ARC, SEADOG, and AXE software.	System Enhancement Associates	Wayne ,NJ
Economic Bulletin Board	(202)377-3870	Economic Statistics/GNP/CPI/Employment, Trade Opportunities	US Department of Commerce	Springfield ,VA
NAVWESA	(202)433-6639	Naval Weapons Engineering Support	Dept. of Navy / Bill Walsh	Washinton, D.C. ,.
NASA Headquarters Info Tech	(202)453-9008	Shareware and Technical Info for NASA PC users.	National Aeronautical and Space Admin.	Washington ,DC
Energy Info Admin E-Publications	(202)586-8658	Variety of Petroleum/Coal/Electricity Energy Statistics	US Department of Energy	Washington ,D.C.
Science Resource Studies BBS	(202)634-1764	Federal R&D Budget - Technical Labor Market Statistics	National Science Foundation	Washington ,D.C.
State and Local Emergency Mgmt.	(202)646-2887	Hazardous Materials/National Dam Watch/Emergency Info	Federal Emergency Management Agency	Washington ,D.C.
USNO Time of Day for Clocks	(202)653-0351	Xmits ASCII Time String - Sync Your PC to USNO Atomic Clock	US Naval Observatory	Washington ,D.C.
US Naval Observatory BBS	(202)653-1079	Time - Date - Sunrise - Sunset - Enter @TCO for Commands	US Department of Commerce US Naval Obser	Washington ,D.C.
FEDLINK ALIX II	(202)707-4888	Info on Federal Libraries -Excerpts Library of Congress News	Federal Library Information Network	Washington ,D.C.
Bruce's Bar & Grill	(203)236-3761	24-line Social System - Chat - Games - Downloads	Bruce Lomasky	West Hartford ,CT
HH Info-Net BBS	(203)246-3747	MS Windows and OS/2 Files our specialty	Lee Winsor	New Hartford ,CT
SDN Project, The 1:141/840	(203)634-0370	The Original Software Distribution Network	Ray Kaliss	Meriden ,CT
Windsor Manor	(203)688-4973	Over 27 Online Adventure Games	Jim Taylor	Windsor ,CT
NASA Spacelink	(205)895-0028	NASA Educational Affairs Div. - Flight Data/Space History	Marshall Space Flight Center	Huntsville ,AL
Investor's Online Data	(206)285-5359	Online Investment/Stock Market Information/Tech Analysis	Don Shepherdson	Bellevue ,WA
Elecric Ideas Clearinghouse	(206)586-6854	Energy Efficiency Efforts In Pacific Northwest-HydroElec	Bonneville Power Administration WSE	Olympia ,WA
Microrim Technical Support BBS	(206)649-9836	Support for Popular R:Base Relational Data Base System	Microrim Corporation	Redmond ,WA
Celebration Station	(207)374-5161	Adventure Games, Chat, and Sigs - Children	Noel Stookey (Paul of Peter,Paul & Mary)	Blue Hill Falls ,Maine
MaxiHost Support BBS	(209)836-2402	MaxiHost BBS - small, very easy to run BBS	Don Mankin	San Ramon ,CA
Occupational Health/Safety BBS	(212)385-2034	Job Safety Issues for Artists, Musicians, Entertainers	Mike McCann/Center for Safety in Arts	New York ,NY
Magpie BBS	(212)420-0527	Support/Demo System for Magpie BBS/Conferencing Software	Steve Manes	New York ,NY
Invention Factory	(212)431-1194	32 Lines - 100 Directories - Good Shareware Catalog 3.2 GB	Mike Sussell	New York ,NY
METRO Online Entertainment	(212)831-9280	32 line DLX with City Guide/Ski Database - Matchmaker - Chat	Bruce Kamm/Metro Online Services	New York City ,NY
Inbound/Outbound/Teleconnect	(212)989-4675	Telephone Sales Trade Magazine Online Service	Harry Newton Publications	New York ,NY
Echo	(212)989-8411	New York Emulation of THE WELL - Unix CAUCUS Conferencing	Stacy Horn/Echo Communications Group	New York ,NY
WWIV Support BBS	(213)208-6689	Support for WWIV BBS Software	Wayne Bell	Rolling Hills Estates ,C
TEAMate Unix Bulletin Board	(213)318-5302	Demo/Support for TEAMate BBS Software for Unix	Bob Baskerville/MMB Development Corp.	Manhattan Beach ,CA
The Business BBS	(213)477-0408	Microsoft Windows Support	Jim Appleby	Los Angeles ,CA
Data Core BBS	(213)842-6880	25 line Major BBS	Matthew Schoen/Delta Enterprises	Los Angeles ,CA
DataLink RBBS System	(214)394-7438	Weather Satellite Imaging, NOAA Satellite Tracking-AMSAT-NA	Dallas Remote Imaging Group/Jeff Wallach	Carrollton ,TX
Inns of Court, The	(214)458-2620	LAN Related Files and Utilities 1:124/6101	Arthur Geffen	Dallas ,TX
BBS America	(214)680-3406	Home of DFW Online Electronic Newsletter	Jay Gaines	Richardson ,TX
Bucks Telematics 273/201	(215)493-5242	Local, National, International Message Conferences	Richard Press	Yardley ,PA
Book BBS	(215)657-6130	Information on 2000 Computer Books - 800 order number	Business & Computer Book Store	Willow Grove ,PA
Herpnet/Satronics TBBS	(215)698-1905	Reptile and Amphibian Studies - Poison Snakes/Toads/Fish	Mark Miller	Philadelphia ,PA
Neuropsychology Bound 157/3	(216)356-1431	Support Groups for Disabled/Physically Impaired	Butch Walker	Rocky River ,OH
Cleveland Freenet	(216)368-3888	Cleveland City Information/Ohio Governor's Office Online	Case Western University/AT&T/Ohio Bell	Cleveland ,OH
PC Ohio	(216)381-3320	Shareware library with 100% USR HST access - 24 lines	Norm Henke	Cleveland ,OH
Rusty & Edies	(216)726-0737	Large ML PCBoard run by Husband and Wife - NFL/Tradewars	Rusty and Edwina Hardenburgh	Boardman ,OH
Transnet	(217)384-5101	Language Translation Services - Dictionaries - Freelance	Gerhard Obenaus	Urbana ,IL
AviTechnic 1:261/662	(301)252-0717	Software Distribution System - BBS Utilities	Tom Hendricks	Lutherville ,MD
National Agricultural Library	(301)344-8510	Agricultural Info/Research Resources	US Department of Agriculture	Beltsville ,MD
Numisnet	(301)498-8205	Collecting of Coins, Medals, and Exonumia	The Mitchell Group	Laurel ,MD
Computer Garden	(301)546-1508	Treasure Hunting - Metal Detectors - Online Catalog	Milford P. Webster	Salisbury ,MD
Advanced Data Services Inc.	(301)695-9116	22 line PCBoard with 5.5 GB of Files	Blaine Brodka	Frederick ,MD
FCC Public Access Link	(301)725-1072	Equipment Authorization Status Advisory Service	Federal Communications Commission	Columbia ,MD
Capital PC User's Group BBS	(301)738-9060	One of the oldest PC User's Groups - 5500 members	Capital PC Users Group/Roger Fajman	Rockville ,MD
Census Bureau Personnel Division	(301)763-4574	Employment Opportunities Within the Census Bureau	US Dept. of Commerce/Nevins Frankel	Suitland ,MD
Census Bureau Office Automation	(301)763-4576	Microcomputers and Office Automation	US Dept. of Commerce/Nevins Frankel	Suitland ,MD
Qualitas, Inc. BBS	(301)907-8030	386MAX and BlueMAX Memory Management Software Support	Qualitas Inc.	Bethesda ,MD
NIST Computer Security	(301)948-5717	Computer Security and Virus Protection Issues	Nat. Institute for Standards/Technology	Gaithersburg ,MD
Osprey's Nest	(301)989-9036	Birdwatching, Bird feeding, Naturalist/Ecology Issues	Fran and Norm Saunders	Colesville ,MD
Bird Info Network	(303)423-9775	Breeding, Raising, Taming, Exotic Birds	Terry Rune/Dave McClauggage	Arvada ,CO
NIST ACTS	(303)494-4775	Automated Computer Telephone Service - Sync PC to NBS Time	Nat. Institute for Standards/Technology	Boulder ,CO
NOAA Space Environment Lab	(303)497-5042	Solar Flare/Geomagnetic Data Online	National Oceanographic/Atmospheric Admin	Boulder ,CO

Comm-Post, The 104/666	(303)534-4646	Astronomy - 725+ MB of Files	Brian Bartee ... Denver ,CO
Denver Exchange, The 104/909	(303)623-4965	Denver's Most Diverse Gay/Lesbian Info Service	James Craig ... Denver ,CO
Pinecliffe BBS 104/28	(303)642-7463	Large Shareware Library/Echomail Conferences since 1985	Craig Baker ... Pinecliffe ,CO
King's Market BBS 104/115	(303)665-6091	400 MB Books, Writers Area - TRS 80 Support	Jim and Karen Burt ... Boulder ,CO
GDP Technologies	(303)673-9470	Outstanding IBM Shareware on a small system	Tom Getty's ... Lafayette ,CO
eSoft Product Support BBS	(303)699-8222	Home of The Bread Board System (TBBS) BBS Software	Phil Becker/eSoft Inc. ... Aurora ,CO
Short Line 104/36	(303)733-0773	Varied Subjects, Fidonet, BinkleyTerm Entertainment	Allan Applegate ... Denver ,CO
The Professional System	(303)740-2223	Writers, Lawyers, EDP Auditors	Bob Voorhees ... Littleton ,CO
C.A.R.L Library Service	(303)863-1350	Citations to 4 Million Texts in Colorado Library System FREE	Colorado Alliance of Research Libraries ... Denver ,CO
Nixpix	(303)920-1263	Large Library of Adult GIF Graphics Images	Nick De Wolf ... Aspen ,CO
Microlink B	(303)972-9600	Over 2.5 GB of IBM Software - Multiline - USA Today News	Girard Westerberg ... Littleton ,CO
Boardwatch Magazine Online Info	(303)973-4222	Distribution Service for USA Today/Boardwatch/Closing NYSE	Boardwatch Magazine ... Littleton ,CO
Superdemocracy Foundation BBS	(305)370-9376	Online Democracy/Political Culture for the Future	Tim Stryker ... Davie ,FL
Heartland Free-net	(309)674-1100	Community Online Service - Free Internet E-Mail Boxes	Peoria County Board/Bradley University ... Peoria ,IL
chinet	(312)283-0559	UNIX System offering Internet Mail	Randy Suess ... Chicago ,IL
Ward and Randy's CBBS	(312)545-8086	World's First and Oldest Micro-based BBS - Since 2/16/78	Ward Christensen/Randy Suess ... Chicago ,IL
Chicago SysLink	(312)622-4442	Special Interest Areas for Ferret/Pet Owners.TRS80/Aviation	George Matyaszek ... Chicago ,IL
Federal Job Information Center	(313)226-4423	Federal Job Opportunity Lists available online	US Office of Personnel Management ... Detroit ,MI
Micro Tech BBS	(314)334-6359	Support for OSIRIS Multiline BBS Software - IRIS Mail	Micro Tech ... Cape Girardeau ,MO
ProComm Support BBS	(314)875-0503	Home of ProComm 2.4.3 and ProComm Plus Comm Prgrms	Thomas Smith/DataStorm Technologies Inc. ... Columbia ,MO
Late Night BBS	(315)592-7300	Home of GENESIS BBS Software - Multinode LANable.	Carter Downer ... Hannibal ,NY
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Public Brand Software BBS	(317)856-2087	Commercial Shareware Vendor	Public Brand Software ... Indianapolis ,IN
Online With Hayes	(404)446-6336	Hayes Public Bulletin Board - Conferences/SIGS/Support	Hayes Microcomputer Products ... Norcross ,GA
Big Peach BBS	(404)446-6650	Home of Automenu and Treeview Software	Marshall Magee/Magee Enterprises ... Norcross ,GA
OASIS BBS	(404)627-2662	Home of Atlanta Bulletin Board List - ABBL	Robert Orr/Online Atlanta Society ... Decatur ,GA
SemWare Support BBS	(404)641-8968	Home of QEdit - A Superb Shareware Text Editor	Sammy Mitchell/SemWare Software Products ... Marietta ,GA
Crosstalk Communications BBS	(404)740-8428	Product Support for Crosstalk for Windows/MK4/XVI	Digital Communications Associates ... Roswell ,GA
IBM National Support Center BBS	(404)835-5300	IBM PC User Groups Database - Newsletter Exchange	IBM National Support Center ... Atlanta ,GA
Index Systems	(404)924-8414	Excellent list of Atlanta BBS systems online	Rodney Aloia ... Marietta ,GA
JOBBS	(404)992-8937	Online Job Listings - 2186 Technical Pos. - 10,000 Corps.	Alpha Systems Inc./Bill Griffin ... Roswell ,GA
Midwest MIDI 1:147/1007	(405)733-3102	MIDI Distribution Net - MIDI sequences and files	John Fordenbacher ... MWC ,OK
Big Sky Telegraph	(406)683-7680	Education/Econ Development info to Montana rural Communities	Montanna Rural Education Network ... Dillon ,MT
Boca Research Support BBS	(407)241-1601	Support BBS for Boca Modems	Boca Research Inc. ... Boca Raton ,FL
QuickBBS Support BBS 363/34	(407)896-0494	Product Support for QuickBBS Software	Richard Creighton/Steve Gabrilowitz ... Orlando ,FL
Ventura Professional Forum	(408)227-4818	Ventura Publisher User's Group BBS	Gene Rodrigues - Ventura Professional ... San Jose ,CA
Netcom Internet Guest System	(408)241-9760	Internet Access System - type "guest" at login for info.	Netcom Online Communications Services ... San Jose ,CA
Dark Side of the Moon	(408)245-7726	Home of WAFFLE, Unix UUCP BBS Software for DOS and UNIX	Thomes E. Dell/Darkside International ... Mountain View ,CA
Ashton-Tate Technical Support	(408)431-2275	dBase and Multimate Support - CIS HOST NAME:ATBBS	Ashton-Tate Corporation ... Torrance ,CA
Seagate Technical Support BBS	(408)438-8771	Installation and Specifications for Hard Drive Models	Seagate/Bill Rudok ... Scotts Valley ,CA
Borland Download BBS	(408)439-9096	Utilities, Macros, Programming Examples for Borland Products	Borland International/Mike Fitz-Enz ... Scotts Valley ,CA
APCUG - GlobalNet	(408)439-9367	Association of PC User Groups - Over 2000 UG officers	Paul Curtis/APCUG ... Scotts Valley ,CA
JDR Microdevices BBS	(408)559-0253	Online Hardware Order - Catalog - 1.1 GB Files - Quizzes	JDR Microdevices ... San Jose ,CA
McAfee Associates BBS	(408)988-4004	Computer Virus Information - VIRUSCAN /CLEANUP Programs	John McAfee/CVIA ... Santa Clara ,CA
DragonNet 386/451	(409)765-5459	Multiline MAJOR BBS with 4 GB - 64 lines Interactive Games	Robert Michael/Dragon Profit Systems ... Galveston Island ,TX
Macalot Bulletin Board	(412)846-5312	Support for Second Sight BBS Software for Macintosh	Jeff Dripps/FreeSoft Company ... Beaver Falls ,PA
PHYSICS Forum BBS	(413)545-1959	Physics and Astronomical Sciences	Univ.of Mass. Dept. of Physics/Astronomy ... Amherst ,MA
PKWare BBS	(414)354-8670	Home of PKZIP 1.10 Compression Utility	Phil Katz/PKWare Incorporated ... Glendale ,WI
EXEC-PC	(414)789-4210	Largest BBS in US - 230 Lines - 70,000 files - 7 Gigabytes	Bob Mahoney ... Elm Grove ,WI
Eye Contact BBS	(415)255-5972	22 line Oracomm - Gay Issues - Popular Chat System	Bill Montgomery ... Mill Valley ,CA
The Well	(415)332-7190	Unix Conferencing System - $10 monthly plus $2.50 Hourly	Whole Earth Lectronic Link ... Sausalito ,CA
Telepath	(415)364-8315	DBMS/Dr. Dobbs Journal Magazine Online Service	M&T Publishing ... Redwood City ,CA
CompuCom Customer Support BBS	(415)499-7711	Support for CompuComm SpeedModem - 9600 bps - $279	CompuCom ... Sunnyvale ,CA
Greenpeace Environet	(415)512-9108	Ecological and Peace Issues - Disarmament/Toxics/Wildlife	Dick Dillman/Greenpeace ... ,
Micro Foundry, The	(415)598-0398	2.2 GB Downloads - Your Online Software Source - Boardwatch	Thomas Nelson/Clockwork Software ... San Jose ,CA
Sonshine Express BBS	(415)651-2440	Family Oriented Christian BBS	Anton Johnson ... Fremont ,CA
Late Night Software 125/555	(415)695-0759	Home of UFGATE - Software to connect PCs to UUCP/Usenet	Tim Pozar ... San Francisco ,CA
Compact Audio Disk Exchange	(415)824-7603	Buy/Sell/Trade Compact Audio Disks Online	Wayne Gregori ... San Francisco ,CA
BMUG BBS	(415)849-2684	Support for Macintosh owners - files - conferences.	Berkeley Macintosh Users Group ... Berkeley ,CA
Fido Software BBS 1:125/111	(415)863-2739	The First Fido BBS and home of Fido BBS 12s	Tom Jennings ... San Francisco ,CA
FOG City BBS 125/10	(415)863-9697	Gay Community BBS - AIDS Info - Desktop Publishing - MACs	Bill Essex ... San Francisco ,CA
Telix Support BBS	(416)439-8293	Support Service for Telix Communications Software	Colin Sampaleanu/Exis Incorporated ... West Hill ,Ontario
Computing Canada Online	(416)497-5263	Adjunct to Excellent Canadian PC Newspaper	Computing Canada Newspaper ... Willowdale ,Ontario
Rose Media	(416)733-2780	19 GB - Home of Rosemail - Publications/Conferences	Vic Kass ... Willowdale ,Ontario

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BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS AND ON-LINE INFORMATION SERVICES - APRIL 1992

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
ATI Support BBS	(416)756-4591	Support for ATI Modems and Video Cards	ATI Technologies	Scarborough ,Ontario
Canada Remote Systems	(416)798-4713	23GB/400000+ files, 3500 Conf's,USENET, IBM/Amiga/Mac	Jud Newell	Mississauga ,Ontario
Public Data Network	(503)474-6662	64-line System with $2.50/hour Local Access	Tony Javoric/Public Data Network	Grants Pass ,OR
Telegodzilla	(503)621-3746	Home of ZModem File Transfer Protocol/YModem/YAM	Chuck Forsberg/Omen Technology Incorp.	Portland ,OR
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Cul-de-Sac Bar & Grill	(508)429-1784	Multiline Service - Ham Radio - Humor - TDBS Applications	Pete White	Holliston ,MA
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Fred the Computer	(508)872-8461	Newspaper BBS. Wierdnet Newswire. List of MA Libraries	Middlesex News-Adam Gaffin	Framingham ,MA
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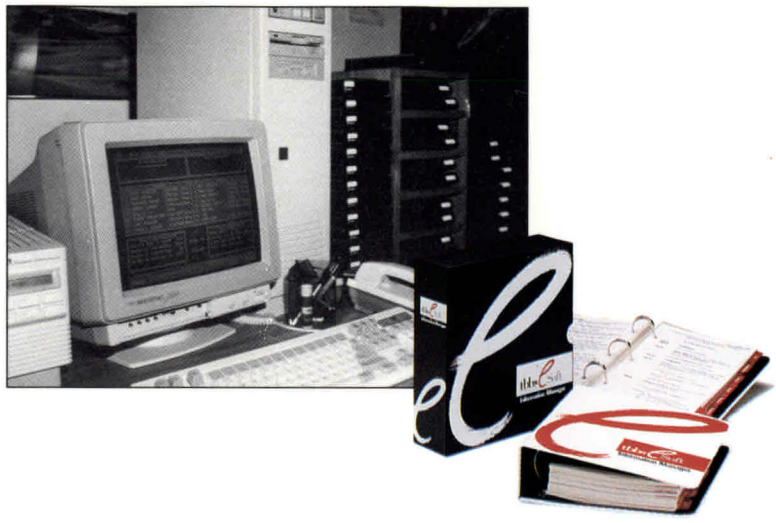

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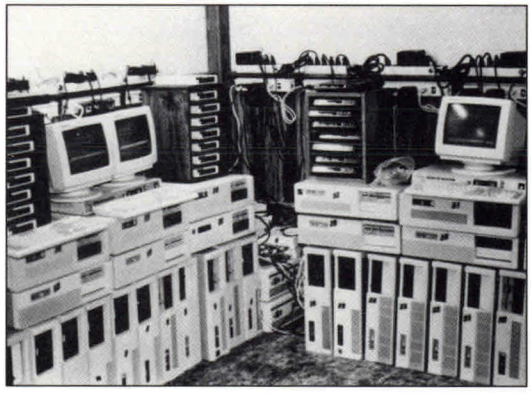

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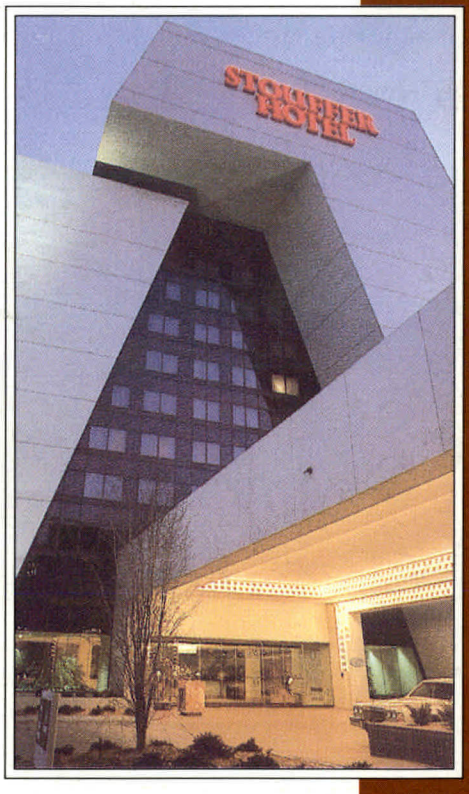

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